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Thematic Issue
Real Estate and Construction Economics

edited by
Michał Gluszak
Cracow University of Economics, Poland
Bartłomiej Marona
Cracow University of Economics, Poland



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Editorial

The main topic of the current issue is Real Estate and Construction Economics. The theme was not extensively addressed in any of previously published thematic issues, with the exception of few conceptual and original research papers (Trinkuniene & Trinkunas, 2014; Płaziak & Szymańska, 2014).

According to Savills (2016), in 2015 the global value of real estate assets (i.e. residential, office, retail, industrial, and agricultural land) was higher than the value of equities, bonds and gold combined. Paradoxically, despite the local character of real estate (and fixity of its location), the real estate market has become more global.

Real estate and construction have always been an interesting and important topics in applied research, and occupied a well-developed niche within economic and managerial literature. Nevertheless, it was not until the global financial crisis that it became a subject of mainstream investigation within finance and economics. Since 2008 a substantial body of theoretical and empirical evidences has been gathered that investigate the links between real estate, macroeconomics, finance (Davis and Nieuwerburgh 2014), as well as their impact on urban development and society. Growing awareness of these relationships among the public and policymakers can be crucial when facing challenges of post-crisis globalizing world economy. As noted by Robert Shiller in his Nobel Lecture: “Had there been a well-developed real estate market before the financial crisis of 2008, it would plausibly have reduced the severity of the crisis, because it would have allowed, even encouraged, people to hedge their real estate risks” (Shiller 2014, p. 1511). That particular remark is true not only in US, but also in emerging markets context.

As real estate and construction is not limited to purely financial and macroeconomic perspective, the current issue aims to address a range of contemporary research problems. While authors differ in theoretical and empirical approaches, the major link between most of the thematic papers published in this issue is the problem of perceptions, preferences and decision-making of different agents within broad real estate sector.

The thematic section, including six empirical articles, starts with the paper *Building Customers' Re-Patronage Intention through Service Quality of Community Mall in Bangkok* written by Supeecha Panichpathom. The main objective of this study is to build a better understanding of the determinants of customers' re-patronage intention by modifying the structure of SERVQUAL instruments and empirically testing this proposed conceptual framework in the context of community malls in Bangkok. In the second paper Radosław Trojanek employs a hedonic model to estimate the impact of urban green areas on dwelling prices in Poznań. The paper authored by Arvydas Jadevicius examines skyscraper indicator and its application in the UK. Bartłomiej Marona and Anna Wilk in their paper entitled *Tenant Mix Structure in Shopping Centres: Some Empirical Analyses from Poland*, try to find an ideal tenant mix structure for the current shopping centres in the Upper Silesian

Urban Area Region in Poland, taking under consideration consumer preferences. Agnieszka Leśniak and Jakub Balicki in their article entitled *Selection of façades finishing technology for commercial building using multi-criteria analysis* investigate the construction decision making process related to building technology, as well as discuss the methods used to select the optimal solution from an investor's perspective. The final paper of the thematic section, authored by Joanna Węgrzyn, *The perception of critical success factors for PPP projects in different stakeholder groups* analyses the opinions of different agents about successful implementation of private-public partnership.

Additionally the issue contains also four off-the-topic papers (Other Articles section). The first paper *Policies towards the OFDI and IFDI in the European Union after the 2008+ crisis* written by Marta Götz describes the (post)crisis FDI policies in Europe and classifies the EU member states according to their policies pursued towards outward and inward foreign direct investment (IFDI, OFDI) in the context of 2008+ crisis. The second off-the-topic article *The Effectual Approach in Born Global Firms - Literature Review of the Current State of Research*, authored by Elena Pawęta, presents a synthesis of research on international entrepreneurship and effectuation theory. Entrepreneurship and innovation themes appear in the paper authored by Katarzyna Łobacz, Paweł Głodek, Edward Stawasz and Piotr Niedzielski. Their paper entitled *Utilisation of business advice in small innovative firms – the role of trust and tacit knowledge* explores the role of trust relationships as well as tacit knowledge in business advisory process. In the last paper entitled *Entrepreneurial Behaviour in Periods of Deterioration of Small Firms' Condition* Jarosław Ropęga discusses the role of entrepreneur in survival of small firms as well as identifies possible actions needed to leave the trajectory of business failure.

To conclude, we are confident that this issue offers an intriguing and inspiring insights into contemporary problems related to real estate and construction economics, but also contributing to other topics related to entrepreneurship and innovation.

Michał Głuszak
Bartłomiej Marona
Thematic Issue Editors

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Building Customers' Re-Patronage Intention through Service Quality of Community Mall in Bangkok

Supeecha Panichpathom

ABSTRACT

Objective: The main goal of the article is to propose a new framework exhibiting relationship between tangible dimension and all other intangible dimensions of SERVQUAL used to analyse the relation to re-patronage intention.

Research Design & Methods: Hypothesised relationships were tested on data which was collected in Bangkok area using a survey questionnaire. Final sample consisted of 225 respondents, frequent visitors of community malls. The data was analysed using exploratory factor analysis as well as simple and multiple regression analysis. The six constructs, studied in this paper, were examined for differences in means across all demographic variables by employing analysis of variance or ANOVA.

Findings: The results exposed that tangible dimension had significant correlation to reliability, empathy, responsiveness and assurance dimensions consecutively. Multiple regression analysis demonstrated that re-patronage intention was explained by empathy, responsiveness and assurance dimensions, not reliability dimension. The ANOVA tests showed no significant differences in means of general data and all other constructs.

Implications & Recommendations: To make shoppers to come back to the malls, managers should recognize the important role of tangible items as an antecedent to intangible items. Retail developers could devote more efforts to maximize the attractiveness of tangible elements and identify the weak areas of service quality by examining the multi-item constructs used to measure service quality.

Contribution & Value Added: This study proposed and tested a modified conceptual model adapted from that proposed by Reimer and Kuehn (2005).

Article type: research paper

Keywords: service quality; community mall; re-patronage intention; SERVQUAL

JEL codes: M31, O18, R2

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INTRODUCTION

In this study, community mall is understood as a neighbourhood shopping centre with open spaces in front of the centre and has at most three storeys. According to Colliers International Thailand report, in 2014 and 2015 community shopping malls would expand to serve residential projects growing around Bangkok area, capital city of Thailand (Kongcheep, 2014). Competition among retail developers has been more fiercely and managing community malls is also more challenging. New shopping channel such as mobile retailing or e-commerce market in Thailand in 2014 is a growing trend in retail business (Pitchon, 2015). Retailers, however, could utilize physical attributes of mortar and brick malls by providing relaxing and hangout atmosphere with convenient access to the malls. Some existing community malls have not operated successfully and have to implement a strategy to draw more customers and keep customers.

One strategy is to supply customers with high level of service quality in order to reduce cost of acquiring new customers, enhance customers satisfaction and loyalty and improve business performance (e.g., Cronin & Taylor, 1992; Kim, & Jin, 2002; Sureshchander, Rajendran, & Anatharaman, 2002).

Parasuraman, Zeithaml and Berry (1985) have developed a measuring tool to measure service quality called SERVQUAL, consisting of ten dimensions. Later on, Parasuraman et al. (1988) have refined their tool and came up with 22 items and five service quality dimensions known as tangibles, reliability, empathy, responsiveness and assurance. Their further study in year 1994 reduced the original items to 21 items and suggests a simultaneous evaluation of both expectations and performance of service quality. Many empirical studies have applied SERVQUAL, as defined by Parasuraman et al. (1988) or with some modifications, across varied retail settings such as in fast food (Cronin & Taylor, 1992), in discount and department stores (Finn & Lamb, 1991), in dental school and tire store (Carman, 1990), utility company, brokerage company and banks (Parasuraman et al., 1985, 1988).

Some scholars have applied Retail Service Quality Scale (RSQS) to study quality of service in a retail sector. Dabholkar, Thorpe and Rentz (1996) developed RSQS and suggested hierarchical structure of five dimensions known as physical aspects, reliability, personal interaction, problem solving and policy. RSQS has been used to replicate the study in a retail sector such as in supermarket (Mehta, Lalwani, & Han, 2000), in department store chain (Siu & Cheung, 2001) and in discount stores (Kim & Jin, 2002) and concluded that it was suitable for setting with less services, and rather more goods like in hypermarket.

Findings as to the direct and indirect influences of service quality perception on behaviour intention are numerous (e.g. Dagger, Sweeney & Johnson, 2007; Ladhari, 2009; and Hooper, Coughlan, & Mullen, 2013), nevertheless, this paper supplements the insights by investigating each dimensions of service quality on re-patronage intention, which is considered as one important variable in marketing literature.

The main objective of this study is to build a better understanding of the determinants of customers' re-patronage intention by modifying the structure of SERVQUAL instruments and empirically testing this proposed conceptual framework in context of community malls in Bangkok. It is hoped that community malls operators or developers will have

insights as to how prioritize and improve service quality which will eventually generate positive re-patronage behaviour.

The remainder of this paper is organized as follows. Following the introduction is a review of service quality and re-patronage literature, which sets the foundation for the conceptual framework with tangibles as a predecessor of service quality perceptions. Next is research methodology and the last three more sections are results of empirical study and discussions; conclusions and implications of the findings followed by limitations and future research directions.

LITERATURE REVIEW AND THEORY DEVELOPMENT

Service Quality

Kang and James (2004) recommend scholars to pay more concentration on dimensions of service quality. Rather than adopting the American perspective, namely SERVQUAL model, they suggest researchers to investigate the European perspective, namely Gronroos' model, which consists of three dimensions (rather than five dimensions as of SERVQUAL) termed technical, functional and image quality.

Asubonteng, McCleary and Swan (1996) gather prior works as to dimensionality of service quality and conclude that the dimensionality from using SERVQUAL is mixed and it is not consistent across studies. Similarly, Brady and Cronin (2001) gather prior works and conclude that there is no agreement on dimensionality of service quality.

Numerous scholars have devoted their efforts to study the structure and dimensions of service quality, however, the results are not unanimous. In this paper, two approaches of measuring quality of service are studied. One is SERVQUAL developed by Parasuraman et al. and the other is Gronroos model. These two approaches complement each other.

Measuring quality has taken place in goods contexts with the hope to reach zero defects or no failure. This measurement concept could not be applied to service sectors due to their intangibility nature of service, heterogeneity of service, perishability of service and inseparability of production and consumption, (Parasuraman et al., 1985; Ghobadian, Speller & Jones, 1994). In 1985, Parasuraman and colleagues undermine the importance of evaluating service quality in terms of both outcome and process of service delivery. This suggestion is consistent with the model proposed by Gronroos (1984, 1994). Gronroos (1984, 1994) claims that there are two types of service quality, namely, technical quality (which was the outcome of service or the actual services received) and functional quality (which was the process of service or the mean to deliver services). This Tangibles dimension of SERVQUAL is adopted as technical quality which could be evaluated objectively. Furthermore, Nisco and Warnaby, (2013) highlight that numerous prior scholars have conducted empirical studies and found that tangible dimension of original SERVQUAL affects service quality perception. For example, Reimer and Kuehn (2005) have proposed a model illustrating Tangibles as an antecedent of other intangible dimensions. Reason to separate tangible construct from the rest constructs of SERVQUAL is due to the nature of tangible that allows customer to perceive about other intangible dimension. For instance, the neat appearance of employees at food and beverage stores in a community mall might make customers assume to receive appropriate care from employees.

The original SERVQUAL tool has divided service quality into two main clusters, or tangible and intangible clusters. One construct designated as Tangibles consists of appearances of physical facilities and personnel. Intangible clusters are comprised of four constructs known as empathy, responsiveness, assurance and reliability. The operationalization of these four constructs is as follows. Empathy refers to the ability to provide customers with appropriate attention and information and also convenient opening hours. Responsiveness is the willingness to help and provide prompt products/services to customers. Assurance describes the ability to ensure customers with confidence, knowledge and trust. Reliability is reflected as the ability to perform service dependably and effectively.

In seminal work of Parasuraman and colleagues originally suggests measurement of the quality of service by comparing the expectations with performance of service delivered to customers. However, prior scholars have adopted different dimensions of service quality. Customers shopping at community malls spend more time in malls and sense the appearances of physical facilities and personnel or staff before making purchase decision. These appearances are tangibles and should be a predecessor to service quality perception. This perspective is consistent with prior studies.

In this study, author groups all five dimensions of SERVQUAL into three clusters, i.e., Tangibles cluster as an antecedent; Interaction cluster, composing of empathy, responsiveness and assurance dimensions, and the last cluster is Reliability. In fact, both interaction and reliability cluster are intangible quality. However, the separation reliability dimension from other intangible dimensions corresponds to the work of Dabholkar et al. (1996), which have grouped service quality into three clusters and their findings have reflected that their proposed model is more effective when managers wanted to diagnose the problem areas in service quality.

Re-patronage Intention

In this study, re-patronage intention is the likelihood to revisit or continue shopping at the same community mall. Howat, Crilley and McGrath (2008) have emphasized that re-patronage intention variable is worth to understand because it is a powerful tool for managing service quality. They also undermined that re-patronage intention is a subset of loyalty construct. Two views of loyalty are behaviour view (including repurchase) and attitudinal view. Re-patronage intention is an attitudinal view of loyalty construct. Lasorn and Kananurak (2012) concentrated on the relation between service quality and loyalty, which is one form of re-patronage, but with customer satisfaction as a mediator. This study intends to investigate direct relation between service quality dimensions and re-patronage without any mediators.

Conceptual Framework Development & Hypotheses Tests

Based on prior research studies included in the literature review, the author developed a conceptual framework as shown in Figure 1.

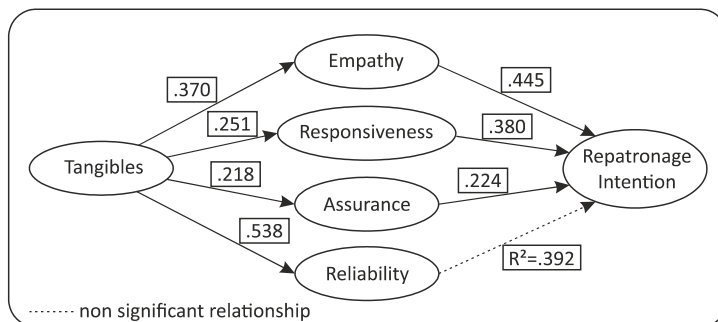


Figure 1. Conceptual Framework of this study

Source: own study.

From the above discussion and framework, the following hypotheses were developed:

- H1a:** Tangibles are positively related to empathy.
- H1b:** Tangibles are positively related to responsiveness.
- H1c:** Tangibles are positively related to assurance.
- H1d:** Tangibles are positively related to reliability.
- H2a:** Empathy is positively related to re-patronage intention.
- H2b:** Responsiveness is positively related to re-patronage intention.
- H2c:** Assurance is positively related to re-patronage intention.
- H2d:** Reliability is positively related to re-patronage intention.

MATERIAL AND METHODS

Sampling & Data Collection

This study employed structured questionnaires and distributed via Google Doc during

Table 1. Number of Respondents Classified by Most Frequently Visits Community Malls

Community Mall	Number of Respondents
Major Avenue, Ratchayothin	77
La Villa, Ari	41
The Crystal @ Crystal Park	28
J Avenue, Thonglor	26
The Circle, Ratchapruk	23
Navamin City Avenue, Navamin	23
K Village, Sukhumvit 26	12
The Nine, Rama IX	10
The Paseo, Ladkrabang	8
Porto Chino, Rama II	4
Rain Hill, Sukhumvit 47	2
Park Lane, Sukhumvit 61	1

Source: own study.

the year 2014. The number of valid questionnaires was 255. Data given by respondents, who are based on the community malls that they most frequently visit during past one year. The list of these malls and the number of all 255 respondents for each mall is shown in Table 1.

Measurement Instruments

The developed measurement items for all five dimensions of SERVQUAL was initially based on original tool generated by Parasuraman et al. (1998), and also borrowed items from prior studies (Table 2) and adapted them to fit the community mall environment.

Table 2. Measurement Items Used in Questionnaire

CONSTRUCT/ITEMS	SOURCE
TANGIBLES	
1. Buildings and physical facilities have a modern looking.	1,3,5,7,8,11,12,16,17,18,22
2. Buildings and physical facilities look clean.	8,9,10,11,19,21,22
3. External appearance of buildings is visually attractive.	1,2,3,5,6,7,8,10,11,12,13,17,22
4. Employees are well dressed and neat.	1,2,5,7,9,10,12,14,15,16,17,18
5. The arrangement of tenants in this mall eases me to get to needed stores.	3,8,20
6. The arrangement of passages in this mall eases me to move around.	3,8,9,18,20,21
RELIABILITY	
1. Employees are dependable in giving me services.	7,17,18
2. Employees maintain integrity and completeness of my records.	2,3,5,7,8,11,17,18
3. Employees provide meticulous services to me.	7,12,19
4. Employees perform effective problem solving when I have problems.	1,2,3,12
RESPONSIVENESS	
1. Employees are willing to help me promptly to get needed products/services.	1,5,7,8,9,10,11,12,16,17,19
2. Employees are easy to be reached.	1,5,7,16,22
RESPONSIVENESS	
3. Employees have ability to promptly provide products/services to me.	3,9,11,12
4. Employees are always willing to help me.	1,18
ASSURANCE	
1. Employees have knowledge to answer my questions.	1,3,5,7,11
2. Behaviours of employees instil my confidence.	1,3,5,7
3. Employees are consistently courteous with me.	1,5,7,11,18
4. Customers feel safe in doing transaction with employees.	1,3,5,7,11,17
EMPATHY	
1. Employees have ability to communicate clearly to me.	19
2. Employees make friendly impression on me.	18
3. Employees understand individual needs of me.	1,5,15,18
4. Employees give me individual attention.	1,3,5,7,11,15,18
5. Opening hours of this mall are convenient to me.	1,3,5,7,15,17,18
6. Employees have my best needs at heart.	7,11,15,17
RE-PATRONAGE INTENTION	
1. I will recommend my friends or acquaintances to have shopping at this mall.	6,10,13,22
2. In the future, I will come back to this mall.	13,22
3. I will continue have shopping at this mall.	4
4. It is very likely for me to shop at this mall again.	4

Notes: 1 Bebko, 2000; 2 Cronin & Taylor, 1992; 3 Dabholkar, Thorpe & Rentz, 1996; 4 Dagger, Sweeney & Johnson, 2007; 5 Harmse, 2014; 6 Hooper, Coughlan & Mullen, 2013; 7 Kang & James, 2004; 8 Khare, 2013; 9 Kitchareon, 2004; 10 Ladhari, 2009; 11 Lonial, Menezes, Tarim, Tatoglu & Zaim, 2010; 12 Markovic & Raspor, 2010; 13 Nisco & Warnaby, 2013

Source: own study.

The questionnaire consisted of three sections. The first one had only one filter question to ensure that respondents were customers who shop at any community mall in Bangkok at least one time during the past one year. Second section, with the instruction to ask respondents to think of one community mall that he/she frequently shopped, was meant to measure all six constructs. All measurement items were five-point Likert scale ranging from 1 (strongly disagreement) to 5 (strongly agreement). The last section was demographic data including gender, age, marital status, level of education, occupation, and individual and household income per month. The questionnaire was pre-tested with 30 samples and was modified for clarity.

To test the suitability of data for factor analysis, this study performed the Kaiser-Meyer-Olkin (KMO) for sampling adequacy and Bartlett's test for sphericity. The reliability tests with coefficient alpha or Cronbach alpha values were computed for all 26 items. The item reduction and scale purification were investigated with criteria of items with low factor loadings (<.5), communalities and low-item-to-total correlations. This process was re-run many times until no more improvement to the Cronbach alpha values and had clear factor dimensions.

Data Analysis

Due to the instability of SERVQUAL dimensions and structure, the use of exploratory factor analysis, simple and multiple regression analysis and ANOVA could be more appropriate techniques than structure equations model. The descriptive statistics and inferential statistics used to test hypotheses were conducted by SPSS software 18 version. Hypotheses 1a to hypotheses 1d was tested with simple regression analysis and hypotheses 2a to hypotheses 2d were tested with multiple regression analysis.

An exploratory factor analysis with principal components analysis and varimax rotation were performed to examine the dimensionality of interaction cluster of service quality and to minimize the number of variables. The criteria in determining number of factors were an eigenvalue greater than 1 and cumulative percentage of variance explained greater than 50 percent.

The six constructs, studied in this paper, were examined for differences in means across all demographic variables by employing analysis of variance or ANOVA.

RESULTS AND DISCUSSION

Descriptive Statistics & Reliability Test

Table 3 presents the mean and standard deviation for all measurement items (22 items for all five dimensions of service quality and four items of re-patronage intention construct). Mean scores of all variables with five-point scale were in the range of 3.690 to 4.259 which was moderate high and standard deviations were in the range of 0.605 to 0.941 which was quite low.

The characteristics of respondents were as follows. Majority of respondents were female (63%) and were single (84.7%). Most of the respondents were aged 20-29 (56.5%) and 30-39 (31.8%) respectively, with 59.2% completed bachelor's degree and 32.9% earned higher than bachelor's degree. Majority of respondents did not work in public sector, with 42% were officers in private sectors and 28.2% were freelance or entrepreneurs. The individual income per month was between Baht 10,000-30,000 (57.2%), and

Table 3. Exploratory Factor Analysis Results and Reliability Tests

Constructs and Items	Factor Loading	Communal Extraction	Mean	S.D.
Tangibles				
Buildings and physical facilities look clean.		0.574	4.141	0.605
Buildings and physical facilities have a modern looking.		0.570	4.016	0.634
External appearance of buildings is visually attractive.		0.559	3.898	0.632
Employees are well dressed and neat.		0.471	3.957	0.666
% of Variance Explained = 54.322		Eigenvalues = 2.173		
KMO & Bartlett's Test = 0.729 & 189.78		Cronbach α = 0.718		
Reliability				
Employees provide meticulous services to me.		0.801	3.973	0.801
Employees maintain integrity and completeness of my records.		0.656	3.820	0.788
Employees are dependable in giving me services.		0.616	3.961	0.657
Employees perform effective problem solving when I have problems.		0.609	4.090	0.745
% of Variance Explained = 67.057		Eigenvalues = 2.682		
KMO & Bartlett's Test = 0.780 & 405.85		Cronbach α =0.778		
Empathy				
Employees make friendly impression on me.	0.818		4.035	0.825
Employees give me individual attention.	0.804		4.012	0.835
Employees have ability to communicate clearly to me.	0.798		3.957	0.780
Employees have my best needs at heart.	0.762		3.847	0.825
Employees understand individual needs of me.	0.698		3.871	0.810
Opening hours of this mall are convenient to me.	0.686		4.259	0.673
% of Variance Explained=59.161		Eigenvalues=8.283		
KMO & Bartlett's Test = 0.887 & 0.00114		Cronbach α =0.818		
Responsiveness				
Employees are easy to be reached.	0.847		3.773	0.911
Employees have ability to promptly provide products/services to me.	0.840		3.839	0.780
Employees are willing to help me promptly to get needed products/services.	0.756		3.910	0.941
Employees are always willing to help me.	0.700		3.933	0.896
% of Variance Explained=8.927		Eigenvalues=1.250		
KMO & Bartlett's Test = 0.825 & 691.36		Cronbach α =0.834		
Assurance				
Customers feel safe in doing transaction with employees.	0.857		4.086	0.705
Employees are consistently courteous with me.	0.791		4.098	0.765
Behaviors of employees instil my confidence.	0.789		3.839	0.764
Employees have knowledge to answer my questions.	0.716		3.902	0.848
% of Variance Explained=8.371		Eigenvalues = 1.172		
KMO & Bartlett's Test = 0.840 & 671.99		Cronbach α =0.866		
Re-patronage Intention				
I will recommend my friends or acquaintances to have shopping at this mall.		0.856	3.920	0.668
It is very likely for me to shop at this mall again.		0.811	4.020	0.763
I will continue have shopping at this mall.		0.689	3.690	0.857
In the future, I will come back to this mall.		0.679	4.100	0.648
% of Variance Explained = 75.879		Eigenvalues = 3.035		
KMO & Bartlett's Test = 0.812 & 633.91		Cronbach α =0.887		

Method of extraction: principal component with varimax rotation. Not include variables with factor loadings <0.50 in the analysis.

Source: own study.

greater than Baht 50,000 (17.3%) respectively while household income per month was at least Baht 100,001 (49%), and between Baht 50,000-100,000 (39.6%) respectively.

Table 3 presents Cronbach alpha values for three clusters of constructs, namely Tangibles dimension, Interaction dimension, which was comprised of empathy, responsiveness and assurance dimensions, and Reliability dimension. All six constructs had Cronbach alpha ranging from 0.718 to 0.887, which were above 0.70 or standard value set by Nunnally (1978) and, therefore, considered good reliability. Also shown in Table 3 was the Cronbach alpha value (0.887) of re-patronage intention construct above 0.70.

Exploratory Factor Analysis

KMO measure for all six constructs were in the range of 0.729 to 0.887 and all Bartlett's tests were all significant ($p < 0.000$) with chi square values of 0.00114 to 691.36 (Table 3) reflecting correlation matrix was not identity matrix. KMO measure of interaction dimensions was 0.903 and chi square value of the Bartlett's test was 0.00313 at a significance level of 0.000. This test indicated that correlation matrix was not an identity matrix.

Three constructs (grouped into interaction dimensions), namely empathy, responsiveness and assurance, were extracted from 14 items (Table 3) and it accounted for 76.459 % of variance which illustrated satisfactory constructs. The eigenvalue as to three constructs ranged from 1.172 to 8.283, which all were above 1. Communality extraction column of Table 3 also reflected the overall significance of these constructs.

In sum, the antecedent of service quality perception is Tangibles construct. The mean scores of four items are in the range of 3.898 to 4.141. The lowest mean score is on the attractiveness of buildings.

Empathy dimension is the most important dimension among the second cluster of service quality or dimensions of interaction quality. It is accounted for 59.161% of the total variance and an eigenvalue of 8.283. This dimension focuses on individualized attention and convenient working hours. The highest loading is for receiving friendly impression from employees. According to mean scores of this dimension, the weak areas are on understanding customers' needs and individualized needs and clearly communication to customers. The second significant dimension is responsiveness dimension, which explains 8.927% of total variance and has an eigenvalue of 1.250. The highest loading is for item "ease of contact to employees" and this item has lowest mean score. The last dimension of interaction dimensions is assurance dimension, which explains 8.371 % of total variance and has an eigenvalue of 1.172. The lowest mean score for this dimension is on item "behaviours of employees instil my confidence" and the highest loading is for item "customers feel safe in doing transaction with employees".

The last cluster of service quality dimensions is Reliability construct. The mean scores of four items are between 3.82 and 4.09. This dimension received quite low scores on each item comparing to other dimension.

Assumptions Checks for Multiple Regression Analysis

The assumptions of multiple regression analysis, which are linearity, homoscedasticity or homogeneity of variance, normality are tested. Moreover, the multicollinearity and outliers are checked. The scatter plot of the residuals against the predicted values (Figure 2) does not show any pattern, thus, visually shows that linearity and homoscedasticity assumptions are met.

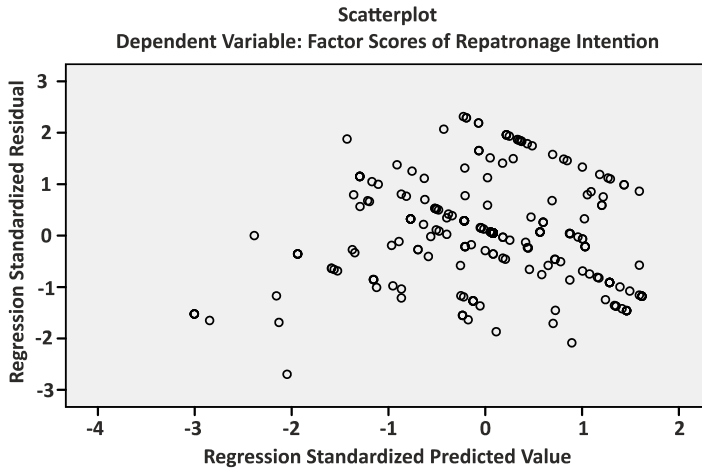


Figure 2. Scatterplot Showing a Relationship with Standardized Residuals Predicted Values
 Source: own study.

The histogram (Figure 3) and the normal p-p plot of residuals (Figure 4) visually demonstrate a normal distribution, thus, normality assumption is satisfied.

The measures of variance inflation factor or VIF of all independent variables (Table 4) are less than 10 and their Tolerance measures are greater than 0.1, which indicate that there is no multicollinearity.

The results of standardized Dfbeta values shown in Table 5 are not less than -2 or greater than 2 so the conclusion is that there is no outliers or influential case in these data.

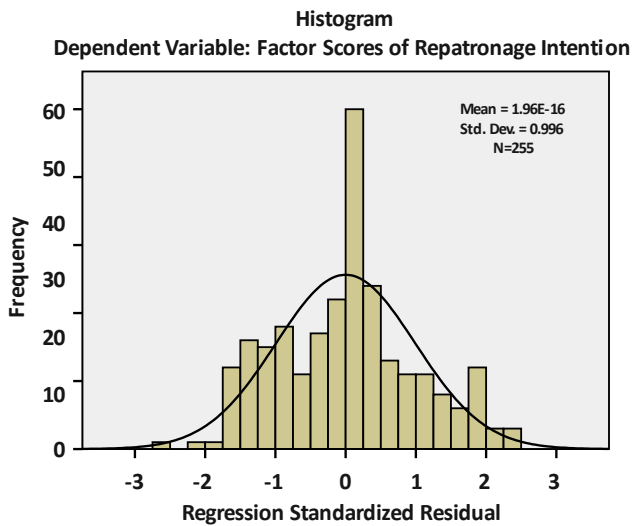


Figure 3. Histogram of Regression Standardized Residuals
 Source: own study.

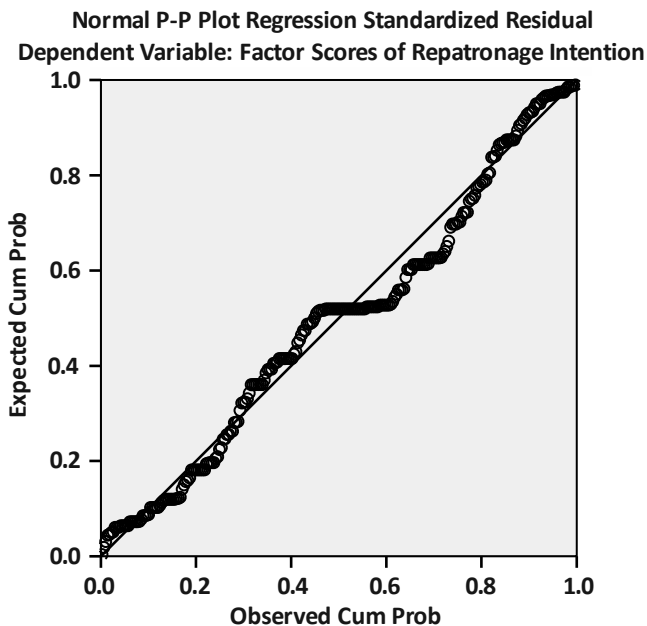


Figure 4. Histogram of Regression Standardized Residuals

Source: own study.

Table 4. Coefficients Matrix with Collinearity Statistics: Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Empower	.445	.049	.445	9.057	.000	1.000	1.000
	Responsiveness	.380	.049	.380	7.727	.000	1.000	1.000
	Assurance	.224	.049	.224	4.555	.000	1.000	1.000

a. Dependent Variable: Re-patronage Intention

b. Linear Regression through the Origin

Source: own study.

Table 5. The Maximum and Minimum Values of Standardized DfBetas: Descriptive Statistics

Standardized DfBetas	N	Minimum	Maximum	Mean	Std. Deviation
SDB1_1 Standardized DFBETA empower	255	-.20484	.33091	.0002700	.07803365
SDB2_1 Standardized DFBETA responsivenss	255	-.30443	.37962	.0001050	.07416826
SDB3_1 Standardized DFBETA assurance	255	-.20384	.29544	.0001122	.06449681
SDB0_1 Standardized DFBETA Intercept	0				
Valid N (listwise)	255				

Source: own study.

In sum, all assumptions of multiple regression analysis are not violated.

Simple and Multiple Regression Analysis

This study performed simple regression analysis to test relationships between Tangibles and the rest of four construct of SERVQUAL dimensions, which is the hypothesis 1a to hypothesis 1d. All hypothesis 1a to hypothesis 1d were supported and regression coefficient at 0.01 level of empathy, responsiveness, assurance are reliability were 0.370, 0.251, 0.218 and 0.538 respectively (Figure 1). The influences of Tangibles construct is on dimensions reliability (0.538), empathy (0.37), responsiveness (0.251) and assurance (0.218) respectively.

Multiple regression analysis was performed to test the relationship between the interaction dimensions of service quality and re-patronage intention. Table 6 indicated the value of R equalled to 0.629 meaning positive and moderate strong relationship between independent variables, which were empathy, responsiveness and assurance, and dependent variable, which was re-patronage intention. The coefficient of multiple determinations or R^2 was 0.395 or 39.5% of variation in re-patronage intention was explained by all independent variables (Table 7). In Table 7, the F-value score was 40.994 with p-value 0.000, which illustrated that there was a significant difference between dependent variable and independent variables. Table 7 showed that only three independent variables, which were empathy, responsiveness and assurance, were significant and influential in the re-patronage intention. The regression equation shown in Table 8 was Re-patronage Intention = 0.466 (empathy) + 0.395 (responsiveness) + 0.239 (assurance). Since reliability was not significant, the author performed multiple regression analysis without reliability construct. The new results were slightly different from the old ones. The new regression equation was Re-patronage Intention = 0.445 (empathy) + 0.380 (responsiveness) + 0.224 (assurance) with R value of 0.626 and R^2 of 0.392. In sum, customers evaluated the quality

Table 6. Multiple Regression Analysis Summary for Re-patronage Intention: Model Summary

Model	R	R Square ^b	Adjusted R Square	Std. Error of the Estimate
1	.629 ^a	.395	.386	.78235675

a. Predictors: Assurance, Responsiveness, Empathy

b. For regression through the origin (the no-intercept model), R Square measures the proportion of the variability in the dependent variable about the origin explained by regression. This CANNOT be compared to R Square for models which include an intercept

Source: own study.

Table 7. Multiple Regression Analysis ANOVA for Re-patronage Intention: ANOVA^{c,d}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100.367	4	25.092	40.994	.000 ^a
	Residual	153.633	251	.612		
	Total	254.000 ^b	255			

a. Predictors: Assurance, Responsiveness, Empathy

b. This total sum of squares is not corrected for the constant because the constant is zero for regression through the origin

c. Dependent Variable: Re-patronage Intention

d. Linear Regression through the Origin

Source: own study.

of empathy, responsiveness and assurance when they decided whether to shop again at the same community mall.

Table 8. Multiple Regression Analysis Coefficients for Re-patronage Intention: Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Empathy	.466	.067	.466	6.992	.000
	Responsiveness	.395	.059	.395	6.682	.000
	Assurance	.239	.058	.239	4.094	.000
	Reliability	-.038	.081	-.038	-4.76	.634

a. Dependent Variable: Re-patronage Intention

b. Linear Regression through the Origin

Source: own study.

Reason explaining the insignificant relation of reliability construct to re-patronage intention might be the validity of this measurement items. When author group these items into interaction dimensions, there is no clear factor structure. Moreover, these items got quite low mean scores, which might be due to bias sampling.

Analysis of Variance (ANOVA)

The results from ANOVA were quite surprising because there were no significant differences shown in the statistics across all demographic variables. This might be due to the limited size of sample.

CONCLUSIONS

Final Remarks and Implications

The proposed framework of this study is consistent with concepts emphasizing tangible elements are main components of service quality (Parasuraman et al., 1988, 1991; Cronin & Taylor, 1992).

This paper combined studies on service quality in the areas of measurement, structure and number of dimensions of service quality applied to community malls in Bangkok. The results of this empirical study supported the hypothesis that Tangibles construct is an antecedent of the other four constructs. One explanation is people shopped in community malls were hedonic motivated people (Dhurup, 2008) and wanted to spend more time in community mall for reasons other than product acquisition, such as socialization, recreation, convenient location and stores' attributes.

First of all, to make shoppers to come back to the malls, managers should recognize the important role of tangible items as an antecedent to intangible items. Retail developers could devote more efforts to maximize the attractiveness of tangible elements and identify the weak areas of service quality by examining the multi-item constructs used to measure service quality. From the above analysis and discussion, managers should pay attention to the following concerns.

From the findings as to tangible elements and due to the ability of customers to evaluate tangible elements objectively, retailers or community malls managers should set first priority on increasing the attractive design of building. As to empathy and responsiveness

dimensions, managers should set training programs to help employees know their customers and leading to generate clearly communication and understandings of customers' needs. For the assurance dimension, managers might need to build the manner of their employees to be capable of addressing customers' transaction with confidence.

Results exposed three dimensions, i.e., empathy, responsiveness and assurance, are important predictors for customers' intention to return to community malls. However, the hypothesised relationship between reliability dimension and re-patronage intention was not significantly supported. In sum, building re-patronage intention in community malls need to emphasize the importance of Tangible elements that has the highest and significant relation to empathy dimension. Reliability dimension did not significantly relate to re-patronage intention. When retailers have insights as to the structure and dimensionality of service quality, they could strengthen and differentiate the higher offerings to target customers.

Limitations and Further Research

Since Tangibles construct is significantly related to all intangible dimensions of service quality, which lead to re-patronage intention, future studies might concentrate on the moderator roles of four dimensions of intangible elements. Moreover, the findings from ANOVA indicated no differences in means across all demographic variable. These findings are contradict with many previous studies (e.g. Baker, Parasuraman, Grewal, & Voss, 2002; El-Adly, 2007; Dhurup, 2008; and Gudonaviciene, & Alijosiene, 2013). However, majority of the respondents of this study represent high educated-people with high household income. They might not be good representatives of community malls in Bangkok. Furthermore, the author distributed questionnaire through Google Doc, which might lead to selection bias. In future, scholars might try to gather data from people who just walk out of community malls, have varied background and try to increase the size of samples. The number of community malls that respondents most frequently visited during past one year is only 12, which might not be a good representation of all community in Bangkok and suburban areas. However, it could represent the popular community malls. Moreover, since this study proposed new integrated framework and used Likert scale with exploratory factor analysis, researchers might use confirmatory factor analysis with better representative of samples to confirm the relationships found in this study. Lastly, researchers might perform comparative study applied both RSQS and a new structure of SERVQUAL as proposed in this study. The relative power of these two models might be more meaningful in setting marketing strategy for building re-patronage intention.

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The Impact of Green Areas on Dwelling Prices: the Case of Poznań City

Radostław Trojanek

ABSTRACT

Objective: The objective of this paper is to estimate the impact of urban green areas on dwelling prices in Poznań.

Research Design & Methods: In order to identify the influence of the green spaces on dwelling prices, the hedonic method was used. The transactions and offers were matched taking into account the location (name of the street), area of a dwelling, location in the building. As a result a new dataset was created with fewer observations (not in all cases the process of matching succeeded) however with better description of transactions. The final data set contained 1438 geo-coded dwelling transactions for the years 2013 to 2014 in Poznań.

Findings: The application of the log-linear model allows to identify the percentage difference in the price of the same dwelling located with different distances to green areas. In case of this research, the results indicate that increase the distance from green area by one kilometre lowered the price of a dwelling by 3% in Poznań in years 2013-2015.

Implications & Recommendations: It is necessary to conduct research on impact of green areas on other types of properties. Different types of urban green areas may affect property prices in different ways.

Contribution & Value Added: The originality of this work lies in studying some aspects of influence of green areas on dwelling prices in Poland.

Article type: research paper

Keywords: dwelling values; hedonic method; GIS; housing market; urban green areas

JEL codes: C33, F21

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INTRODUCTION

The market value of a dwelling depends mainly on its physical characteristics, out of which the most important is location. In research on factors affecting the value of housing in developed markets, environmental elements are very often taken into account. These factors can be divided, due to the nature of the effect on the value into two groups:

- positive influence (e.g. the neighbourhood of green spaces, water tanks),
- negative influence (e.g. noise, air pollution).

Urban Green Spaces may provide a wide range of benefits to the inhabitants of a given city. The following potential benefits of urban parks have been identified (Konijnendijk et al. 2013):

- human health and wellbeing, i.e. positive impacts of parks and park use on human health (both mental and physical) and wellbeing, either through direct or indirect effects such as recreation and leisure activities,
- social cohesion / identity: the role of urban parks in strengthening social ties, relations and cohesion,
- tourism: leisure visits outside of the own living or working environment, typically longer-term stays. Apart from potentially promoting the health and wellbeing of visitors, tourism is also of interest due to its contributions to the local economy,
- biodiversity: the role of parks in harbouring and promoting biodiversity, and species diversity in particular. Biodiversity has a direct link to human wellbeing (e.g., through nature experience), while it also provides an important base for ecosystem functioning and thus the diversity of an ecosystem,
- air quality and carbon sequestration: positive impacts of urban parks in terms of reducing air pollutant levels and carbon sequestration,
- water management: contributions of parks to stormwater / run off regulation,
- cooling: the role of parks in the cooling of urban areas.

The aim of this article is to identify the impact of urban green areas on dwelling prices in Poznań. In order to estimate the impact of urban green areas on dwelling prices the information on asking and transaction prices of dwellings in Poznań was collected. The use of asking prices is determined by the fact that in Polish conditions, the access to information on features of sold dwellings is limited. The data included in notarial contracts was the most valuable source of information on real estate prices, but they have one drawback – they do not provide a full description of a property. In this study property descriptions from the catalogue of offers with the actual transactions were matched. In this research hedonic method was used. The essence of the hedonic method lies in the assumption that the price of heterogeneous goods may be compared with its attributes.

LITERATURE REVIEW

The value of green space has been the subject of a great deal of research (Crompton, 2001; McConnell & Walls, 2005; Waltert & Schläpfer, 2010). In most cases the results suggest that green spaces have a positive impact on price of dwelling or house (Correll, Lillydahl,

& Singell, 1978; Luttik, 2000; Tyrvaïnen1997; Kim & Johnson, 2002; Crompton, 2005; Anderson & West, 2006; Herath, Choumert, & Maier, 2015). However, several of the researchers found some contradicting results and state that some factors, such as crime rates or noise, may lower the positive effect of parks on property values (Kong, Yin, & Nakagoshi, 2007; Troy & Grove, 2008, Chen & Jim, 2010).

The most frequently used methods of green space effect on housing prices estimation include: models based on revealed preferences and models based on stated preferences. Both approaches are based on the theory of consumer choice. Revealed preferences are consumers' actual choices and they are analysed with the use of historical data. Of all the models based on revealed preferences the hedonic price model (HPM) is the most frequently used method for analysing the influence of green spaces on house prices.

Application of the hedonic method to value environmental amenities has a long tradition (McConnell & Walls, 2005). In this regard a large literature analyses the effects of open space on property values by using the HPM. Table 1 presents selected recent research is presented along with major findings.

Table 1. Recent research on UGA and property prices

Authors of research	Place of Re-search	Type of property	Number of sample, time of re-search	Findings
Hoshino, Kuriyama (2009)	Setagaya ward, Tokyo	Single room dwellings, for rent	2370 asking rents (05-06 2007)	The effect of parks on property values varies with the park's size: the number of medium-sized neighbourhood parks is positively related to rental prices, while small- and large-neighbourhood parks are not statistically positively influential by rental values.
Bark et al. (2011)	Tucson, Arizona	Single family residence	6676 transactions (1998-2003)	Neighbourhood-level greenness had the largest marginal effect on home values relative to other greenness measures. Results indicate that neighbourhood-level greenness has important external benefits.
Panduro, Veie (2013)	Aalborg, Denmark,	Houses, apartments,	12928 transactions (2000-2007)	Access to green space in cities can be associated with both significantly higher and lower housing prices depending on the type of green space. Differences in the capitalization of different types of green space between apartments and houses.
Kolbe (2015)	Cologne	Apartments	85046 transactions (1995-2012)	A positive price effect of parks, forests and water and an inverse relation between the price variable and the presence of fallow land and farmland was found.
Zygmunt, Głuszak (2015)	Cracow	Undeveloped land	355 transactions (2002-2011)	Strong evidence for positive impact of forest proximity on undeveloped property prices.

Source: own research.

The capitalization of open space in house prices has been investigated by incorporating various variables (Kolbe & Wüstemann, 2014):

- the influence of size of the nearest open space area on housing prices,
- total quantity of surrounding open space areas,
- the visibility of open space,
- distance effects in hedonic studies analysing the impact of open space on house prices.

MATERIAL AND METHODS

In order to establish the influence of the green spaces on housing prices in Poznań, the information on transaction prices and asking prices was collected in the period between the 1st quarter of 2013 to the 4th quarter of 2014. In regard to the transaction prices of dwellings in Poznań, notarial contracts including data about transaction prices of premises in Poznań served as the source of information. The data covered over four thousand items. Data included in notarial contracts concerning dwellings include information on the following cost factors:

- the transaction date,
- the price,
- the area of a dwelling,
- the floor on which a dwelling is located,
- the area of auxiliary premises.

Such set of factors may bias the results of the research – notarial contracts do not include information on strong price components, such as, for example, the standard of completion of a dwelling. Because of that in this research information on dwellings offers was used as well. The transactions and offers were matched with the use of computer software taking into account the location (name of the street), area of a dwelling, location in the building. As a result a new dataset was created with fewer observations (not in all cases the process of matching succeeded) however with better description of transactions. The final data set contained 1438 geo-coded dwelling transactions for the years 2013 to 2014 (Figure 1).

The information on urban green spaces was captured from official site of Poznań city. In case of this research 30 objects (3 forest and 27 parks) were the basis of examination.

In this research the hedonic method was used. The first researcher to use the hedonic method to analyse the real estate market was probably Ridker – he aimed at identifying the influence of pollution reduction on house prices (Coulson, 2008). The theoretical framework of the hedonic method was developed by Lancaster (1966) and Rosen (1974).

The essence of the hedonic method lies in the assumption that the price of heterogeneous goods may be connected with its attributes. In other words, this method may be used for estimating the value of particular attributes of a given product. In order to identify the influence of individual features on the value of a specific good, econometric equations are constructed. The price of a given good is the response variable, whereas its quantitative and qualitative attributes are the explanatory variables.



Figure 1. Urban green spaces and dwelling transactions in Poznań

Source: own study based on Board of Geodesy and Municipal Cadastre GEOPOZ in Poznań.

The equation may be recorded in the following way:

$$P = \beta_0 \sum_{i=1}^K \beta_i X_i + u \quad (1)$$

where:

- P - price of a good;
- β - regression coefficient;
- X - attribute of a good (value driver);
- u - random error.

The key issue in hedonic methods is to choose the form of the regression function. The log-linear form of the regression function is most frequently used for studying changes in the prices in the real estate market in empirical research:

$$\ln P = \beta_0 \sum_{i=1}^K \beta_i X_i + u \quad (2)$$

There are a few reasons for such a choice of function (Malpezzi, 2003). First, the log-linear model allows the added value to change proportionally to changes of the size and other attributes of the dwelling. Secondly, the estimated regression coefficients are easy to interpret. The coefficient of a given variable may be defined as a percentage change of

the value of an dwelling caused by the unit change of a value driver. Thirdly, the log-linear function often eases problems connected with heteroscedasticity or with the variability of a random component.

Dwellings are heterogeneous in nature. This heterogeneity can create heteroscedasticity in the residuals of the estimation of the price function. Indeed, heteroscedasticity was detected in the model (according to White's test). Therefore, we estimate a robust model, employing GLS (a backward stepwise method). Due to the high number of independent variables available, multicollinearity may be a serious concern. Multicollinearity leads to unstable coefficients and inflated standard errors. The Variance Inflation Factors (VIFs) was used to detect it. The VIF values in model do not exceed 3.8 which is in line with the most conservative rules of thumb that the mean of the VIFs should not be considerably larger than 10.

RESULTS AND DISCUSSION

The choice of qualitative and quantitative data was limited by the availability of information in the database. Table 2 presents variables used in the study.

Table 2. Qualitative and quantitative variables applied in the model

variable	symbol	description
location	d1-grunwald, d2-jezyce, d3-nowe miasto, d4-stare miasto, d5-wilda	5 dummy variables. if the dwelling is located in a given district, it takes the value 1; otherwise it takes 0.
quarter	quarter	1-8 depends on quarter in which transaction took place
construction technology	tech	it takes 1 if the dwelling is located in a building constructed in prefabricated technology, in case of traditional technology it takes 2.
time of construction	tc1 – before 1939 tc2 – from 1945 to 1964 tc3 – between 1965-1989 tc4 – between 1990-2004 tc5 – after 2005	5 dummy variables. if the dwelling is placed in a building built in a given period, it takes the value 1; otherwise it takes 0).
area	area	the area of a given dwelling is measured in square meters.
standard	stand	it takes value 1 for dwellings with the lowest standard, and 4 for those with the highest.
rooms	rooms	number of rooms.
height of building	height	1-buildings up to 5 floors 2-buildings above 5 floors
floor	floor1 - ground and last floor floor 2 - intermediate floors floor3 - first and second floor	3 dummy variables
green area	duga	distance to the edge of nearest green area (in km)

Source: own calculations.

Then, using GRETL software, the parameters of functions in which the log-price1m2 (price of 1 m²) of a dwelling was the response variable, while the explanatory variables included the location, construction technology, floor, standard, time of construction,

height of building floor space, number of rooms and distance to green area. Table 3 presents the results of the regression function for the equation.

Table 3. The estimates of price1m2 function parameters, heteroskedasticity-corrected, used observations 1-1438, dependent variable: price1m2 log

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	8.72826	0.0355605	245.4485	<0.0001	***
Ddistrict_1	0.0380175	0.0118407	3.2108	0.0014	***
Ddistrict_2	0.0588749	0.012971	4.5390	<0.0001	***
Ddistrict_3	0.0855516	0.0131125	6.5244	<0.0001	***
Ddistrict_4	0.0866749	0.0117985	7.3463	<0.0001	***
Dtc_1	-0.249881	0.0171007	-14.6123	<0.0001	***
Dtc_2	-0.211997	0.012918	-16.4109	<0.0001	***
Dtc_3	-0.183631	0.0127914	-14.3559	<0.0001	***
Dtc_4	-0.0705134	0.0100571	-7.0113	<0.0001	***
Dfloor_1	-0.0309205	0.0087159	-3.5476	0.0004	***
quarter	0.00462746	0.00109394	4.2301	<0.0001	***
rooms	0.0127923	0.00559276	2.2873	0.0223	**
height	-0.0270055	0.00835071	-3.2339	0.0012	***
tech	0.0230272	0.0108067	2.1308	0.0333	**
standard	0.0451113	0.00364427	12.3787	<0.0001	***
area	-0.00587811	0.000337328	-17.4255	<0.0001	***
duga	-0.0331073	0.00407991	-8.1147	<0.0001	***
R-squared	0.609795				
Adj R-squared	0.605402				
Doornik–Hansen¹	10.4039, with p-value 0.00550591				
Shapiro–Wilk	0.996729, with p-value 0.00401083				
Lilliefors	0.022483, with p-value ~ = 0.07				
Jarque–Bera	8.4768, with p-value 0.0144307				

¹The last four rows present statistical tests for the normality of the residuals' distribution (we reject H0, that the distribution is normal, when $p < 0.01$)

Source: own calculations in GRET.L.

On the basis of the obtained results it may be concluded that the explanatory variables used in the equation explain the changes of dwelling prices (price per m²) in Poznań in 60%. Moreover, most of the variables applied in the model turned out to be statistically relevant.

From research point of view, the statistical relevance of *distance to urban green area* variable is important. The application of the log-linear model allows to identify the percentage difference in the price of 1m² of the same dwelling located with different distances to green areas. In this case, the value of the coefficient with *distance to urban green* variable is -0.033, which indicates that increase the distance from green area by one kilometre should lower the price of 1m² of a dwelling by more than 3%.

CONCLUSIONS

The aim of this article was to identify the impact of urban green area on dwelling prices in the city of Poznań. The application of the log-linear model allowed to identify the percentage difference in the price of the same dwelling located with different distances to green areas. In case of this research, the results indicates that the increase of the distance from green area by one kilometre lowered the price of 1m² of a dwelling by more than 3%. The results are consistent with previous research (urban green areas have a positive influence on the value of dwellings located in multifamily buildings). It is necessary to conduct research on impact of green areas on other types of properties. Also, different types of urban green areas may affect properties in different ways. It would be interesting to examine the influence of parks and forests separately taking into consideration their size as well.

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Skyscraper Indicator and its Application in the UK

Arvydas Jadevicius

'The skyscraper is the great architectural contribution of modern capitalistic society and is even one of the yardsticks for twentieth-century superheroes, but no one had ever really connected it with the quintessential feature of modern capitalistic history - the business cycle'

Thornton (2005, p.51)

ABSTRACT

Objective: The research examines Skyscraper Indicator and its application in the UK. Until more recently, it was thought that this indicator was not suitable in gaging trajectory of Britain's economy. The current study is therefore set to investigate whether Skyscraper Indicator can be used as a potential leading indicator for the UK.

Research Design & Methods: Research employs dummy variable regression to test the hypothesis. The study selects quarterly UK GDP and GDP per capita series over Q1 1960 - Q4 2014 period as macro variables and a series of dummies for construction starts, durations and completions of the record-breaking buildings in the UK.

Findings: Despite some of the methodological limitations, estimates suggest that the announcement of the construction of tallest building in the UK is related to national GDP.

Implications & Recommendations: To make robust economic forecasts, analysts may therefore use the announcement of the construction of the record breaking skyscraper as a possible bell-weather in gaging future direction of the UK economy. They may turn their gaze towards the London skyline when contemplating UK market movements.

Contribution & Value Added: The paper adds additional evidence on the contested Skyscraper Indicator issue.

Article type: research paper

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INTRODUCTION

Since the 17th century, when it became easier to produce the alloy (Roberts, 1983), steel structures became a backbone of the building industry and high-rise building in particular (Briody, 2009). At the end of 18th century further advancements in building engineering almost entirely eliminated building height constraints. As such, the height of the building was no longer determined based on commercial feasibility analysis only (Skelton, Bouchlaghem, Demian, & Anumba, 2010; Barr, Mizrach, & Mundra, 2015). By building upwards, developers were able to increase floor-space on any given plot of land to generate greater profits (The Economist, 2015), as well as address major economic and geographic challenges cities were facing throughout generations (Knight Frank, 2015).

Interestingly, almost a century ago Clark and Kingston (1930) estimated that the 'true economic height' of the skyscraper is no more than 63 storeys with anything above generating 'diminishing returns'. Considering a need for extra steel and concrete, more elevators, stairs and sprinklers and an increase in operational costs, the optimal height of the skyscraper has not probably changed after hundred years (Watts, Kalita, & Maclean, 2007; The Economist, 2015).

This so called 'profit maximising builder' model however has been contested (Barr et al., 2011) as the high rise buildings are considered by some as being more than just a shelter (Barr et al., 2015), and that developers are still building record-breaking towers disregarding their bottom line (Clark and Kingston, 1930; Barr, 2010a; Barr, 2010b).

Commentators, including Thornton (2005), Barr et al. (2011; 2015), Lawrence (2012) and the Economist (2015a), therefore noticed an interesting correlation between construction of the tallest building in the world and economic crisis. As the Economist (2015a) reports, there are nearly 100 buildings over 200 meters under construction worldwide – a record breaking numbers. Kingdom Tower in Saudi Arabia is under construction which will be the tallest building in the World (Jivanda, 2014). Once completed, the Okhta Centre, Gazprom Neft's headquarters, will be the tallest building in Europe (Kononova, 2009). Shanghai Tower will be the second-tallest building in the world and tallest building in China (Flannery, 2015). Seeing these developments in the world economy, one may question financial soundness of these structures.

A conventional theory suggests that during times of easy credit when interest rates are low, businesses expand and hire more people to produce their goods and services. This then triggers demand for space, which is followed by an increase in construction activity. A need for space, competition for land and 'cheap capital', makes long-term capital intensive projects (skyscrapers) more attractive relative to short-term and less-capital intensive ones (shorter buildings). Thornton (2005) coined this expansionary economic condition as 'Cantillon effect'.

The skyscraper project is then announced and construction begun during the late phase of the boom in the business cycle (Thornton, 2005; Watts et al., 2007; Hanke, 2010). However, after several years, business cycle turns (Jadevicius & Huston, 2014) with the skyscraper being completed during the early phase of the economic correction (Thornton, 2005). Again, knowing the propensity for business activities to follow a downward and upward movement around its long-term growth trend, and a time needed to complete a superstructure, one may wonder a rationale for building a record breaking skyscraper.

Though determinants of skyscraper height have not been well understood (Barr et al., 2015), few explanations as to why developers are aiming for such heights exist. For Watts et al. (2007) it is population growth and urbanisation. Helsley and Strange (2008) suggest a symbolic nature of super-tall buildings - a desire to have 'the tallest' building in the city is part of the 'dissipative competition over the prize of being tallest', i.e. ego-based motives. For Barr et al. (2015), skyscrapers are being built as part of regeneration strategies and positive changes in business environment. This links to what Watts et al. (2007, p.461) call a 'Bilbao effect', i.e. 'where the regeneration inspired by one building can propagate the success of an entire city'. However, from a cost-benefit analysis perspective, these positive developments do not justify a pursuit for extreme heights.

Until more recently, however, it was thought that Skyscraper Indicator was unable to predict the UK crises due to the belief that this index was based on US or World market data. However, some research argues that the Skyscrapers Indicator is applicable in the UK (Skelton et al., 2010). The current study is therefore set to investigate whether Skyscraper Indicator can be used to appreciate potential corrections in the UK economy.

MAIN CONTRIBUTION

The research examined Skyscraper Indicator and its application in the UK. The study employed UK GDP and GDP per capita as a macro variables and a series of dummies for construction starts, durations and completions of the record-breaking buildings in the UK.



Figure 1. London skyline, February 2015

Source: courtesy of Karolis Adomaitis.

Surprisingly, the announcement to build the tallest building in the UK implies that the UK economy can be approaching its peak. Regression estimates confirm this hypothesis.

Analysts are therefore advised to use the announcement of the construction of the record breaking skyscraper as a possible bell-weather in gaging future direction of the UK economy. They may turn their gaze towards the London skyline when contemplating UK market movements.

PREVIOUS STUDIES

The Skyscraper Indicator started with Lawrence's (1999) observation that construction of the world's tallest building conceded with an economic crisis. As Lawrence (2012, p.2) more recently observed, over the past one-and-a-half century this indicator has shown a negative correlation between construction of the next tallest building in the World and an impending financial crisis. For Lawrence (*ibid.*), availability of cheap money is the main cause for capital misallocation. Easily available capital triggers skyscraper construction with its completion during the economic contraction.

This Lawrence's idea has been extended with the most notable contributions by Thornton (2005), Barr (2010a; 2010b; 2013), Barr et al. (2015) and a series of articles published by the Economist (2006; 2010; 2015a; 2015b).

Thornton (2005) interpreted the Skyscraper Indicator in the light of 'Cantillon effect' and Austrian school's theory of the business cycle. Thornton appreciated limitations of the Skyscraper Indicator. First, indicator did not predict all major economic corrections such as depressions of 1920–21, 1937–38, and 1981–82. It then indicated recessions when downturns were insignificant such as that in 1913 and in the early 1970s. External factors such terrorism and the evolving nature of the economy could make it obsolete completely. However, acknowledging drawbacks of Skyscraper Indicator (like any other economic indicator), Thornton was positive about its ability to predict important downturns in the economy. The commentator presented with the chronology of major economic corrections and their association with the building of the world's tallest skyscrapers (Table 1).

Kaza (2010) added some more critique of the original idea presented by Lawrence (1999). According to the Kaza, Lawrence presented with a too narrow definition of the phenomenon. He missed an issue of entrepreneurial errors in building super-tall structures. He also based his observation on financial crises rather than economic contractions. Kaza subsequently provided additional evidence of skyscraper effects at the state levels. As his overview suggested, the tallest building in 40 US states were completed during economic contractions as identified by NBER (National Bureau of Economic Research), thus adding extra evidence for the usefulness of Skyscraper Indicator.

Barr (2010a) assessed the determinants of skyscraper building cycles in Manhattan over 110-year period from 1895 to 2004. The author developed a 'market for tall buildings' model which was based on two principle assumptions, i.e. rational and myopic expectations. The model incorporated average height and completions as depended variables. Regressors were New York City area population, national employment rate in FIRE (finance, insurance and real estate) industry, building costs, access to financing, property tax rates and zoning regulations, as well as set of dummy variables for specific government programmes. Empirically, myopic model fitted data better rejecting rational expectations model. Barr therefore hypothesised that a combination of long construction lags as well as semi-irreversibility of super tall building projects together with the 'irrational exuberance' have helped to determine the skyline of Manhattan.

Barr (2010b) examined the determinants of skyscraper height for New York. The research covered 1859-2004 period. As the regression equation suggested, economic factors, including population growth and employment levels on one side and interest rates and building costs on the other, combined with land use regulation were significant in explaining building height in the city. Interestingly, the so called 'the quest for social status', i.e. builders engaging in height competition especially when economy was growing, would result in developers adding four to six more floors per project simply to overtake their peers.

In Barr (2013), the author compared the determinants of the market for skyscrapers in Chicago and New York over the 1885-2007 period. The dependent variables were the number of skyscraper completions and the height of the tallest building completed each year in the cities. Explanatory variables were the same as in Barr (2010a) with additional dummies for zoning in both cities. As regression estimates suggested, each city responded to the same variables differently. Thought the presence of strategic interaction across the two cities existed.

In a more recent study Barr et al. (2015) examined interrelationship between skyscraper height and business cycles in the United States, Canada, China and Hong Kong. The author employed Granger causality and cointegration tests to assess their claim. Announcement and completion dates for record-breaking skyscrapers were dependent variables. GDP per capita (as an output measure) was an explanatory variable. The estimates suggested that GDP per person and skyscraper height track each other with an output causing building heights. This led author to suggest that a growing economy and rising incomes fuelled developers' ego-based motives to stimulate building heights. Although, overall the research findings undermine claims that Skyscraper Indicators is a useful recession forecasting tool. On the contrary, the commentators cautioned when interpreting the underlying assumptions related to Skyscraper Indicators.

Garza (2012) applied Skyscraper Indicator onto 23 cities in Latin America. The author used building height as the dependent variable. The panel of explanatory variables included GDP of a given city, its area, height increase, dummy for a record breaking building, annual growth rate, dummy for residential building, AR(1) term and time-control variable covering 1985-2010 period. His estimates were in a favour of traditional theory in explaining building height.

In 2006, the Economist ran a special report on the subject. The magazine started with two difficulties designers and developers are facing when considering skyscrapers. Difficulty one is economics. This is simply a demand for high-rise building as these structures do not appeal to all tenants and residents. Difficulty two is structure. Skyscrapers have low gross leasable area. What is more, they cost more and take longer to build; they are constrained by existing technology. This is why during economic expansion very few skyscrapers are being completed with most of them being speculatively developed. Nevertheless, the article continued suggesting that skyscrapers are alluring and developers continue building them.

In the following two articles, the Economist commented on the link between construction of record-setting buildings and financial crises. In the first article the Economist (2010a) has shown how a completion of Burj Khalifa, a tallest building in the World, coincided with the Global Financial Crisis. In the second piece, the Economist (2010b)

commented on Clock Royal Tower Hotel in Mecca, Saudi Arabia as a possible bellwether for a likely economic correction in the country. More recently, the Economist (2015a) synthesised Barr's et al. (2015) findings. The magazine suggested a possible relationship between the construction of the tallest building in the world and economic crisis.

The literature illustrates the recent wide coverage Skyscraper Indicator received over the last decade. Researchers examined this phenomenon from a variety of historical and geographical perspectives but, surprisingly, without application to the UK economy. This study rectifies the oversight and investigates whether Skyscraper Indicator can be used to appreciate potential corrections in the UK economy.

Table 1. The World's tallest buildings and economic crises

Completed	Building	Location	Height (m)	Economic crisis
1908	Singer	New York	185	Panic of 1907
1909	Metropolitan	New York	212	Panic of 1907
1913	Woolworth	New York	240	-
1929	40 Wall Street	New York	281	Great Depression
1930	Chrysler	New York	317	Great Depression
1931	Empire	New York	379	Great Depression
1972/73	World	New York	420	1970s stagflation
1974	Sears	Chicago	440	1970s stagflation
1997	Petronas Towers	Kuala Lumpur	450	Asian Crisis
2008	Burj Khalifa	Dubai	818	Global Financial Crisis

Source: (Lawrence, 1999; Thornton, 2005; Bloch, 2010).

DATA AND METHODOLOGY

Data

The study uses UK GDP and GDP per capital quarterly series as macro variables. The series come from the Office for National Statistics (ONS, 2015) and cover Q1 1960 – Q4 2014 period. Table 2 present series summary statistics. The use of both GDP estimates is substantiated from Barr et al. (2015). The commentators successfully employed both macro-aggregates for the US, Canada, China and Hong Kong in assessing co-movements among skyscraper height and economic output.

Table 2. Summary statistics for UK GDP and GDP per capita series

Series	Mean	St.dev.	Kurtosis	Skewness	Min.	Max.	N
GDP	256652	95395	-1.218	0.337	118220	429673	220
GDP p.c.	2595	2251	-1.184	0.487	123	7012	220

Source: (ONS, 2015).

Considering that record-breaking height is a significant indicator of business cycle peak/trough, a series of dummy variables are computed for start, completion (opening day) and construction duration of the skyscraper. Table 2 lists all record-breaking buildings completed in the UK since 1970s. Looking at the start dates of the buildings, an interesting observation emerges - construction of these buildings coincided with economic expansion and their completion - with UK economic corrections. Construction of Guy's Tower started

in April 1968 with UK's GDP growing 5.5 per cent that year. It was completed in May 1973 with UK GDP growth declining from 3.67 in Q4 1973 to -3.98 in Q1 1974, following three more quarters of negative growth (a recession). The similar chronology emerges for Tower 42 which construction started in second part of 1971, when UK GDP enjoyed 3.48 per cent growth. After 10 years in construction, it was opened in Q4 1980, when UK annual GDP went down -2.17 per cent. Other four buildings were also initiated at the height of economic expansion following their completions at the peak/turn of the economy, with most notable being the Shard, which construction began during the Global Financial Crisis.

Table 3. Tallest buildings in the UK and economic crises

Building	Location	Start	Completion	Height (m)	Economic crisis
Guy's Tower*	London	Q2.1968	Q2.1973	143	1970's crisis
Tower 42	London	Q3.1971	Q4.1980	182	Thatcher crisis
1 Canada Square	London	Q1.1988	Q1.1991	235	1980's crisis
Citi Tower	London	Q4.1998	Q4.2001	200	1990's financial crisis
HSBC Tower	London	Q1.1999	Q3.2002	210	1990's financial crisis
The Shard	London	Q1.2009	Q3.2012	306	Global Financial Crisis

* after a £40 million programme of repairs and environmental improvements, Guy's Tower now stands at 149m (NHS, 2014)

Source: (NHS, 1976; Canary Wharf, 2015; CoStar, 2015).

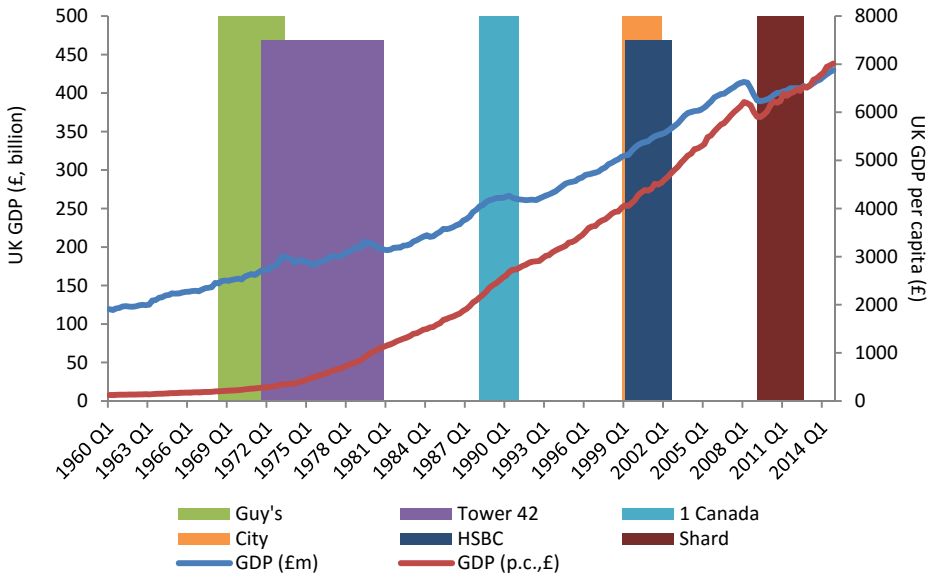


Figure 2. UK GDP series and dates of record breaking buildings

Source: (Canary Wharf, 2015; CoStar, 2015; NHS, 1976; 2014).

Granger Causality with Dummy Variables

The study then computes Granger causality with dummy variables to quantify causal effects between skyscrapers related variables and UK GDP (Koop, 2006; Barr et al., 2015):

$$Y_t = \alpha + \theta Y_{t-q} + \beta D_{t-q} + e_t \quad (1)$$

where:

- Y_t - is UK GDP series;
- D_{it} - is skyscraper related dummy;
- e_t - is an error term;
- D_1 - is dummy for start date;
- D_2 - is dummy for completion (opening) date;
- D_3 - is dummy for project duration.

Equations were modified with Newey-West (1987) estimator to remove instances of autocorrelation and heteroskedasticity in the error terms. Additionally, Breusch-Godfrey test for serial correlation in the residuals was performed. Where needed, equations were further modified by introducing an AR(p) term to control for serial correlation.

EMPIRICAL ESTIMATES

The estimates for one-directional interdependence between GDP and the tallest building dummies are presented in Table 4 below. As it illustrates, there are statistically significant causal links between UK GDP and construction of the tallest building in the UK.

Construction starts came up as the most significant of all three dummy variables. Considering an aggregate GDP series, construction starts variable passed statistical threshold for all six buildings under the study (HSBC Tower construction starts dummy is significant at 10 per cent level). Unfortunately, neither building completions nor duration had the same degree of causal magnitude.

What's regarding GDP per capita series, again, construction starts dummy variable stood out as being significant in explaining national output. Although, it's weighting was less significant compared with the aggregate GDP series. Significance of the other two dummies varied within the sample.

The current estimates are somewhat rivalling Barr's et al. (2015) conclusion, who presented probably the most formal analysis of the Skyscraper Indicator, but are in line with the other publications on the subject. As noted above, Barr et al estimated that height and GDP per capita are cointegrated and that economic growth influences height. Their hypothesis however rejected the usefulness of Skyscraper Indicator as a leading indicator.

The opposite however applies for the UK. The decision to build the tallest building in the UK can provide some indication that the UK business cycle is reaching the peak. These estimates concur with Lawrence (1999; 2012), Thornton (2005), Garza (2012) and the Economist (2006; 2010a; 2010b; 2015a) who's commentaries were in favour of the Skyscraper Indicator theory.

Certainly, the current study was afflicted with a number of limitations. The sample size (the number of record breaking buildings and time-series duration) was limited.

Table 4. Regression estimates

Dummy variables effect on GDP series	Guy's Tower			Tower 42			1 Canada Square		
	Start	Completion	Duration	Start	Completion	Duration	Start	Completion	Duration
Coefficient	-2928	-1824	307.43	2177	-1529	-737	1641	-200	-392
	(0.000)	(0.227)	(0.739)	(0.000)	(0.000)	(0.265)	(0.000)	(0.597)	(-0.525)
R-sq.	0.171	0.165	0.162	0.167	0.164	0.167	0.165	0.162	0.163
B-G test	0.003	0.000	0.088	0.007	0.067	0.057	0.064	0.062	0.068
	(0.955)	(1.000)	(0.764)	(0.933)	(0.796)	(0.809)	(0.799)	(0.804)	(0.792)
Citi Tower	Citi Tower			HSBC Tower			The Shard		
	Start	Completion	Duration	Start	Completion	Duration	Start	Completion	Duration
Coefficient	1551	-967	772	-1029	618	578	-4588	2979	176
	(0.000)	(-4.269)	(0.106)	(0.070)	(0.130)	(0.151)	(0.000)	(0.000)	(0.805)
R-sq.	0.164	0.163	0.164	0.163	0.162	0.163	0.183	0.171	0.162
B-G test	0.020	0.078	0.016	0.069	0.051	0.023	0.386	0.025	0.068
	(0.886)	(0.778)	(0.897)	(0.791)	(0.819)	(0.877)	(0.530)	(0.873)	(0.792)
Dummy variables effect on GDP per capita series	Guy's Tower			Tower 42			1 Canada Square		
	Start	Completion	Duration	Start	Completion	Duration	Start	Completion	Duration
Coefficient	-9.537	-21.338	-23.059	-1.054	2.081	-8.603	8.241	5.110	13.590
	(0.051)	(0.000)	(0.000)	(0.833)	(0.386)	(0.160)	(0.212)	(0.236)	(0.110)
R-sq.	0.213	0.214	0.224	0.212	0.213	0.215	0.213	0.213	0.215
B-G test	2.445	2.309	0.088	2.475	2.468	2.341	2.438	2.437	2.213
	(0.116)	(0.126)	(0.764)	(0.114)	(0.114)	(0.128)	(0.116)	(0.116)	(0.134)
Citi Tower	Citi Tower			HSBC Tower			The Shard		
	Start	Completion	Duration	Start	Completion	Duration	Start	Completion	Duration
Coefficient	56.026	-12.352	10.994	10.140	17.891	8.540	-77.211	78.629	18.247
	(0.000)	(0.392)	(0.465)	(0.327)	(0.004)	(0.388)	(0.000)	(0.000)	(0.359)
R-sq.	0.226	0.213	0.214	0.213	0.214	0.214	0.236	0.238	0.218
B-G test	1.540	2.462	2.158	2.388	2.450	2.277	3.902	1.264	2.550
	(0.211)	(0.115)	(0.139)	(0.120)	(0.115)	(0.129)	(0.048)	(0.257)	(0.108)

NB: Probability is in parentheses; * significant at 5% level; the number of lags in Breusch-Godfrey Serial Correlation LM Test (B-G test) is 1; all equations contain AR(2) term.

Both GDP and GDP per capita series were tested for stationarity; 1st-differences series passed statistical muster at 5% confidence level:

GDP – ADF test: -6.724, critical value -2.875; PP test: -10.691, critical value -2.875;

GDP per capita - ADF test: -6.402, critical value -2.875; PP test: -10.274, critical value -2.875;

Source: own study.

What is more, construction period for each height-breaking building varied, i.e. it took almost 10 years for Tower 42 to be completed, while 1 Canada Square, Citi Tower and HSBC Tower were completed in 3 years' time. Moreover, no lead-lag relationship was tested for variables.

These limitations aside, the estimates suggest that one can potentially predict UK economic correction purely by looking at the city skyline. Certainly, skyscrapers have varying functions – some skyscrapers are symbols of prestige or iconic identity, others showcase the architectural achievements of modern capitalism (Thornton, 2005), while some simply provide shelter, security, privacy as well as facilitate intra-group and communication (Barr et al, 2015).

However, taken together, the current study provided some evidence that Skyscraper Indicator can be used as a leading indicator for the UK. Analysts are therefore advised to use the announcement of the construction of the record breaking skyscraper as an alternative indicator in gaging future direction of the UK economy.

Certainly, more research using alternative available techniques and data is needed to further support these findings. However, as the market develops, and more data becomes available, this creates opportunities for future inquiry.

CONCLUSIONS

It's been now four centuries since the widespread adoption of alloys and three centuries since the onset of the high-rise buildings. Since then, skyscrapers started dominating skyline of the cities. Last year, a record number of tall buildings were completed.

Curiously, the propagation of skyscrapers led economists to note an interesting interrelation between the construction of the tallest building and financial crises. Plausible explanations were postulated that during times of easy credit, with low interest rates, businesses expand and hire more people to produce their goods or services. Higher levels of activity trigger demand for space, which stimulates construction activity. A need for space, competition for land and 'cheap capital', makes a long-term capital intensive projects (skyscrapers) seem more attractive relative to short-term and less-capital intensive ones (shorter buildings). During the late phase of economic expansion, skyscraper projects proliferate but then the cycle turns. Ironically, as recession spreads, a glut of skyscrapers construction projects litters the skyline.

A number of publications have attempted to resolve the paradox, covering the gamut of academic journal articles to magazine or news stories but, curiously without properly examining the UK skyscraper situation. The estimates confirm the notion that the announcement of tallest building can forecast the UK business cycle peak. Analysts should therefore get concerned when looking at the London skyline.

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Tenant Mix Structure in Shopping Centres: Some Empirical Analyses from Poland

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ABSTRACT

Objective: The objective of this paper is to find an ideal tenant mix structure for the current shopping centres in Upper Silesian Urban Area Region in Poland, taking under consideration consumer preferences and behaviour.

Research Design & Methods: Apart from literature review, empirical research is based on a survey questionnaire. The Analytic Hierarchy Process was applied in the analysis of the data collected.

Findings: The research confirmed that to a great extent the valid tenant mix structure in the surveyed shopping centres meets with friendly attitude of customers. However, there are areas where improvement can increase the visitors' satisfaction. Moreover, it was proven that shopping remains the main reason for customers' visits in shopping centres, in spite of extending the offer of this type of places with new functions.

Implications & Recommendations: Real estate managers are recommended to take actions aiming at increasing competitiveness on the market via the extension of the proposed shopping offer and their adjustment to customers' expectations. For the managers, the results of the conducted research suggest lack of the necessity for radical transformations, and transforming Polish shopping centres into facilities of the fourth and fifth generation, which is slow in Poland, is, as it turns out, not necessarily expected, since customers identify shopping centres mainly with their traditional function.

Contribution & Value Added: The proposed research model and findings can serve as a useful lens within the research of tenant mix structure in shopping centres in other parts of the Poland.

Article type: research paper

Keywords: Tenant mix; real estate management; shopping centres; shopping mall

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INTRODUCTION

The retail market in Polish agglomerations is becoming saturated (Krakow REM, 2014). According to Knight Frank' Report (Commercialmarket H1 2015, 2015), at the beginning of 2015, the total retail stock in Poland exceeded 11 800 000 sq m. The largest volume is situated like in the case of office market (Zieba, Belniak, & Gluszak, 2013) in major agglomerations – 6 400 000 sq m. Another 3 300 000 sq m was offered in the medium-sized markets (populated by 100 000-400 000 inhabitants) and 2 100 000 sq m in the small-sized cities (below 100 000 citizens). Due to increasing competition in the retail market in Poland, other shopping centers have been extended and re-commercialized. The total space of extended phases amounted to 80 000 sq m in H1 2015. Concept of tenant mix seems to be useful in the case of developing new shopping centres as well as in the case of restructuring and reorganizing existing ones.

Tenant mix can be defined as a relationship between the percentages of different store types in a shopping mall (Dawson, 1983) and it is an important key to the success of a shopping centre. Literature on tenant mix can be divided in two parts (Borgers *et al.*, 2010); "the first part focuses on the question *how to get as many customers as possible to a shopping centre to spend their money there?* This question is related to the competitive position of the shopping centre in the region. The second stream of the literature deals with the question *how to tempt customers to visit all parts of the shopping centre?*". Our study deals with the first question and the main objective is to find an ideal tenant mix structure for the current shopping centres in Upper Silesian Urban Area Region in Poland, taking under consideration consumer preferences and behaviour. Apart from literature review, the study is based on survey research. The Analytic Hierarchy Process was applied in the last part of data analysis.

LITERATURE REVIEW

Tenant Mix of Shopping Centres

A shopping centre is a group of selected retail and service outlets within a well-planned, designed and managed allocated space. The group, determined by the tenant mix structure, is one of the most important criteria of choosing a shopping centre by customers who search for friendly atmosphere inclining to do shopping. An adequately planned tenant mix structure is important for customers, also from the perspective of a possibility to save time (Ojouk, 2010). Tenant mix bears great practical significance, and thus it is the subject of scientific deliberations, the effect of which is the emergence of interesting theoretical concepts.

It is believed that the optimum structure should be characterized by a compatible variety of goods suppliers and service providers, as well as effective space allocation and tenant placement, thus bringing about the interaction with customers. In a broader perspective, it should include sufficient public facilities and services, qualitative shopping environment in order to meet customers' expectations in regard to offered products and services, comfort, entertainment or sensations (You *et al.*, 2004).

The function of the retail sales centre which a shopping centre performs is the reason for which on its area there are outlets with clothes and accessories, furniture and furnishings, sport, hobbies, presents, multimedia, office equipment, music and books in accordance with GAFO (General Merchandise, Apparel and Accessories, Furniture and Other Sales) classification (Michon *et al.*, 2008). In addition, one of the main functional components of the facility is considered to be a super or a hypermarket (Rutkowski & Skarzyński, 2011). However, due to the occurrence of new formats of commercial establishments on the market and the resulting intensification of market competition, as well as the pressure of Internet sales, a trend of changes in the tenant mix structure is observed. Some shopping centres decide to introduce specialization focused on the development of clothes and accessory trade, therefore resigning from electronics, furnishings or sports articles (Mejia & Eppli, 1999).

Recently, the growing significance of the entertainment function in a shopping centre is noticed. More and more often commercial establishments use entertainment-related facilities as a key strategy to attract customers. The statistics indicate that owing to the introduction of the entertainment function in their offer, the time of customers' stay in the shopping centre prolongs, which also influences an increase in their spending. What is more, a worldwide trend emerges which consists in the promotion of the idea of family entertainment centres through extending the offer with amusement parks, mini golf courses, thematic museums, laser rooms or games in virtual reality. However, the most frequently used facilities with regard to broadly understood entertainment include: an isolated restaurant part, technological stalls with games, children's playgrounds, various events, such as exhibitions, fashion shows, etc. The need for entertainment can be also satisfied directly by tenants who influence shopping sensations via external stimuli (e.g. Barnes&Noble bookshop, or Herman's sports store). It is particularly desired from the perspective of consumers who more and more often expect sensations engaging all senses by interesting sights, pleasant sounds or desired fragrances (Kong & Kim, 2013). A challenge in designing the tenant mix is to keep a balance between retail tenants and non-retail tenants, including tenants implementing the entertainment function (Ojouk, 2010).

Factors Contributing to Success of Shopping Centres: Theory Overview

Central place theory assumes that tenant mix structure in a shopping centre is not significant. It assumes that a consumer chooses the centre nearest to his habitation. However, central place theory is commonly criticized because it is limited to one factor only, which is location, and does not consider the others, such as: price, quality or image (Ojouk, 2010). In addition, the theory is based on the assumption that while choosing a shopping centre, the customer is guided by a single purpose - for example, he is planning to buy specific merchandise or take advantage of one service only. Nowadays, when going to a shopping centre consumers aim at meeting numerous needs, thus, the reason for their visit is not limited to the purchase of one good/service (Mejia & Eppli, 1999).

Spatial interaction theory derives its sources from the gravity theory. It is based on the assumption that "the share of customers that a shopping centre attracts from its environment is inversely proportional to distance and proportional to the attractiveness of the shopping centre". Over the years, the theory evolved and served to define the probability of choosing a particular shopping centre by a customer by means of a defined algorithm.

Reservations around this theory arose largely around the notion of attractiveness. Scientists tried to define attractiveness by means of measurable ratios, forgetting that it is a “multidimensional concept”, and in addition “people may have imperfect impressions of these objective attributes” (Timmermans, 1993).

Minimal differentiation theory refers to the concept of clustering stores operating within a specific market sector in order to achieve better performance (Ojouk, 2010). The theory refers to the idea of comparison shopping, which, from the customer’s perspective is desired, particularly during the purchase of full search goods. Possibilities to compare goods categorized within the same group are searched for by consumers. Bucklin (1967) observes that savings expected by customers on account of comparing the goods exceed the related costs of transport, even in the case of the necessity to visit many shopping centres (Eppli & Benjamin, 1994).

The above approach is developed in agglomeration theory which also assumes the occurrence of product heterogeneity in shopping centres, intensifying search activities of consumers, which in a real way influences an increase in the amount of shopping in so-called clusters. In agglomeration theory, the use of the economies of scale is emphasized. Great significance is attributed to the phenomenon of so-called co-opetition, also called competitive cooperation or co-competition. On the one hand, tenants cooperate using the infrastructure and the environment (for example, parking facilities or architecture), co-creating marketing strategies or directly benefiting from the flow of customers appealed by attractive shopping centre (agglomeration). On the other hand, tenants compete with each other for customers’ wallets and their time (Teller & Reutterer, 2008). In this theory, among advantages of the tenant agglomeration process, the variety and growth of the attractiveness of a shopping centre are mentioned (You et al., 2004). From customers’ perspective, the main advantage of commercial establishments’ clustering is regarded to be the provision of utilitarian and hedonistic values by the establishment. Such an experience becomes possible owing to the assurance of the atmosphere influencing stimuli, various stores, entertainment facilities, parking space, customer-oriented system and broadly understood accessibility (Abghari & Hanzae, 2011).

A lot of significance in planning tenant mix structure is also attributed to locating individual stores in the shopping centre. Bid Rent Theory refers to this aspect. According to the principles of Bid Rent Theory, all economic activities seek the accessibility to customers and labour that centrality bestows. Because each function differs in its ability to earn profits from the use of a central location, a process of competitive bidding occurs in the form of the rent each is prepared to pay. Therefore, at least in theory, all retail locations are occupied by the function capable of paying the highest rent, and land is put to its optimum use. This will typically result in higher-order functions occupying core locations and lower-order functions locating on the periphery of a retail centre (Reimers & Clulow, 2004). What are practical implications of Bid Rent Theory for customers of shopping centres? The use of the described theory in planning tenant mix structure in shopping centres boils down to locating entities operating in individual industries in the central location of the premises or on its periphery. Therefore, the customer visiting a shopping centre can expect that in the central part of the shopping centre he will buy, for example, jewellery or other luxurious goods. The reason for such a state of affairs is the fact that the optimum area of such stores is relatively small, and at the same time, the unit price and the unit cost of the sold

merchandise are high. On the other hand, an example of units located in the peripheral zones include retailers operating in the clothing trade (Tang, 2009). As the research by Benjamin, Boyle and Sirmans shows, the biggest traffic of customers is observed in the central part of the facility, and along with the increasing distance from the exact centre, the traffic is less and less intense (Carter & Allen, 2012).

In planning the location of individual stores, findings of the research conducted into the social life and consumer behaviour are useful (Szczepeńska, 2001). Urban Land Institute, with the cooperation of S. Brown referred to social conditionings, where a relation between the allocation of tenants and impulse buying was observed. The aforementioned relation in practice implies the location of stores or service outlets contributing to impulsive behaviours in the places where the flow of customers is regarded to be high. In consequence of the above, it is recommended to locate tenants fulfilling such conditions on lower floors, where consumer traffic is bigger (Yiu, Xu, & Cheong, 2008).

Recently, a theory referring to external effects is gaining popularity, which in the context of a shopping centre usually boils down to so-called "anchor-tenants". In this case, an external effect is manifested in the fact that customers are appealed by attractive "anchors", and at the opportunity they also do shopping in smaller shops. It has been proven that the image of "anchor-tenants" is a significant success factor of less important tenants (Mejia & Eppli, 1999). The use of this theory is also related to the necessity of the most optimum tenant placement. For this purpose, research into customer traffic in shopping centres is applied. The results of the conducted research enabled to create the "dumb-bell" concept consisting in the location of "anchor-tenants" on two opposites poles of the centre. Between them there are smaller varied units situated in the shopping arcade. The mutual relation of "anchors" is based on competition, however, they are so attractive from the customer's perspective that the distance separating them is not an obstacle for consumers who cover a specific distance. The functioning of a shopping centre designed in such a way can be compared to the operation of a magnet – "anchors" attract customers, and the side effect is the creation of customer flow between them. Also smaller tenants located in arcades, passed by customers on their way from one "anchor" to another, take advantage of such placement. The component of the presented design are also side arcades which do not lead to so-called "anchors". The choice of the place in the side arcade for a tenant usually means a lower rent rate, but at the same time it is connected with lower frequency of customer traffic. The central court performs the function of a transport node, enabling customers to choose direction, whereas the court located in the neighbourhood of the anchor is the passage area (Fong, 2003).

In designing aisles of contemporary shopping centres strong reference to the concept of American Main Street is visible. The concept, rooted in the United States, refers to such values as simplicity, safety and light-heartedness of childhood years. Strong American propaganda performed by various media, bore fruit in the transfer of this design to the shopping centre. A worldwide trend of interior design of shopping centres emerged, manifested in the appearance of isles imitating city streets, giving customers a possibility to return to childhood (Celińska-Janowicz, 2011).

MATERIAL AND METHODS

The main objective of this study is to find an ideal tenant mix structure for the current shopping centres in the Upper Silesian Urban Area Region in Poland, taking under consideration consumer preferences and behaviour. The objective is accompanied by three research hypotheses.

The first of the adopted hypotheses assumes that the majority of customers are satisfied with the currently valid tenants mix structures in shopping centres in the Upper Silesian Urban Area Region in Poland. However, it is assumed that there is certain percentage of people who are dissatisfied and that there are discrepancies between the current trade structure in shopping centres and the one preferred by consumers. Based on the conducted research, the areas within tenant mix which require alteration will be identified.

Moreover, the research also assumed (hypothesis no. 2) that the most important determinant when choosing a shopping centre in tenant mix is the number of stores. Verification of this hypothesis will enable managers to plan tenant mix properly and direct their activities to the most important aspects. Hypothesis no. 3 concerning the most frequent reason for visits in shopping centres, which is considered to be doing shopping, in spite of extending the offer to include other functions, performs an analogous role.

The research was divided into two stages. In the first stage, information on the expectations of customers of shopping centres was collected by means of PAPI- Paper and Pencil Interviewing conducted from 24th to 25th October 2015 in the neighbourhood of one of Silesian shopping centres. 259 respondents took part in the interview, the majority of them living in the Silesian Province cities. The research method was selected due to its efficiency and the reliability of the respondents' answers. The questionnaire included a question about a general level of satisfaction with current tenant mix structures in shopping centres. The aim of the study was also the identification of motives guiding respondents visiting the shopping centre. The questionnaire included also the aspect of lines of trade the respondents are interested in during a visit in the centre. On that basis, a comparative analysis was performed with currently valid averaged tenant mix in 10 biggest shopping centres in the Upper Silesian Urban Area Region, namely Silesia City Center, C.H. Europa Centralna, Galeria Katowicka, M1 C.H. Czeladź, M1 C.H. Zabrze, C.H. Forum, C.H. Auchan Sosnowiec, C.H. 3 Stawy, C.H. Pogoria and Rawa Park Handlowy. The next part of the questionnaire assessed factors which, based on the literature of the subject, have impact on the choice of a specific shopping centre by the respondents with regard to tenant mix. Within the group of factors related to tenant mix, the following factors were included in the survey questionnaire:

- The number of stores;
- Trade diversification - the number of available industries. e.g. fashion, footwear and leather goods, health and beauty, sport, furnishings;
- Gastronomic offer - the number of restaurants and cafes located in the shopping centre;
- Entertainment offer - the number of entertainment units, including the cinema and fitness;
- Trade specialization - a share in the structure of the selected trade which is most numerous with regard to the number of shops;

- Well-known brands - the presence of the most common brands according to the analysis of the Polish Council of Shopping Centres in December 2014 (Play, Inmedio, Orange, CCC, T-Mobile, Rossmann, Plus GSM, Apart, Reserved, Deichmann, Vision Express, Sasec, Poczta Polska, Empik, Orsay) (Sadat, 2015).

Trade diversification is not the opposite of trade specialization. An example is a situation in which in a shopping centre there is mainly an offer of construction articles and furnishings, however, in the facility there are individual units representing other lines of trade - a chemist's, a bank, household appliances. Numerous stores with construction articles and furnishings will determine the specialization, and completing with single health, service or multimedia stores will determine diversification.

In the next stage of the conducted research, Analytic Hierarchy Process was applied. In the research a Super Decisions computer tool was used. The use of the AHP enabled the full realization of the main objective and the verification of hypothesis no. 2, which, in consequence, enabled to formulate recommendations for managers, aiming at an increase the attractiveness of tenant mix structures in the surveyed shopping centres (Adamus & Gręda, 2005). The structure of the decision-making model started from the formulation of the main objective which was assumed to be the definition of the possibilities to make tenant mix in shopping centres more attractive. Then, decision-making criteria were defined, which for the needs of the research were limited to tenant mix. The decision-making criterion helps to determine what influences the fulfilment of the objective, and sub-criteria - what influences the fulfilment of specific criteria (Prusak, Stefanów, & Gardian, 2013). Within this research, such sub-criteria as a bigger number of stores, gastronomic or entertainment outlets and well-known brands, diversified structure or trade specialization were distinguished. Sub-criteria influencing the choice of a shopping centre with regard to tenant mix were determined based on the literature of the subject (during their selection, a quantitative limitation principle was pursued) (Adamus & Gręda, 2005). The research skipped the stage related to the indicating decision variants. The full model was presented in Figure 1.

Objective
Making tenant mix more attractive
Main criterion
K1: Tenant mix
Detailed criteria
K11: Bigger number of stores
K12: Greater trade diversification
K13: More gastronomic outlets
K14: More entertainment outlets
K15: Greater trade specialization
K16: More well-known brands

Figure 1. The decision-making model of the choice of most attractive shopping centre in the Upper Silesian Urban Area Region in 2015

Source: own study.

The analysis of the presented decision-making model takes place from the level of sub-criteria (detailed criteria) in relation to the main criterion.

The main problem in the discussed method is considered to be the difficulty in measuring qualitative opinions and phenomena expressed verbally. Due to the above, a numerical Saaty Rating Scale was developed, which enabled to compare pairs of individual criteria. The Saaty Rating Scale using figures from 1 to 9 should be interpreted as follows:

- 1 – equal importance of the compared criteria,
- 3 – weak or moderate advantage of one criterion over the other,
- 5 – strong advantage of one factor over the other one,
- 7 – very strong dominance of one determinant over the other one,
- 9 – extreme preference of one element over the other one.

Pair-wise compared values express compromising perception of the adjacent factors. The comparison of individual factors in relation to each other is characterized by the inversion. It means that juxtaposing, for example, K11 and K12 giving value a is equal to the fact that comparison of K12 and K11 is $1/a$. In the performed AHP, opinions on individual sub-criteria from respondents participating in the PAPI research were used. In this research they are treated as a group of experts possessing necessary knowledge to solve a decision problem (Prusak, Strojny, & Stefanów, 2014). Due to the multitude of opinions, it was necessary to aggregate them in accordance with the procedure of group decision making process.

RESULTS AND DISCUSSION

An analysis of the research results enabled to confirm hypothesis no. 1 that the overwhelming majority of the respondents are satisfied with the valid tenant mixes. Positive answer was given by 79% of the respondents. 21% of the respondents expressed dissatisfaction, and among major causes of their dissatisfaction they indicated dispersion of stores belonging to one trade in the area of a shopping centre. Customers who went to a shopping centre in order to buy a specific product, particularly high order goods decide to compare offers prior to the purchase. Due to too big distance between stores of a given trade, customers are forced to cover relatively far distances, thus, wasting their time which evokes the sense of frustration. With regard to the above, dissatisfied customers are opponents of multi-storey shopping centres because their architectural solutions cause considerable limitations in moving around. In addition, with regard to the location of individual stores and service outlets, an architectural solution using individual premises separated from each other with open space cause unfavourable conditions to customers due to the changeability of atmospheric conditions. An argument frequently appearing among the respondents was noise caused by changes in tenant mix. In their responses, the surveyed mainly referred to an example of Katowice shopping centre in which so-called lifting tenant mix is taking place. Although the process has been spread into a few months so that customers felt its consequences to the smallest extent possible, it still raises general frustration among visitors. Going to the shopping centre with a specific intention, customers have recently come across closed shops. The lack of the update to the premises map causes confusion among customers. Moreover, the surveyed people relatively often

stressed the fact that new brands in shopping centres meet their expectations to a lesser extent, because they are often luxurious brands or firms completely unknown to them. The attachment to brands which for a long time have stayed in the area of shopping centres visited by them questions the validity of the changes being made. However, it should be remembered that some changes do not depend on the centre managers. Among other factors causing negative reception of the present tenant mix is an insufficient number of brands. Some respondents also think that in the area of shopping centres there is too few stores offering men's attire. Shortages are also observed with regard to specialist stores. In addition, the offer of basic services, such as tailor or shoemaker is insufficient. More and more often, customers of shopping centres expect complex services from this type of places. Among the responses, there were also indications to insufficient child care services. In some shopping centres there are no points taking care of children during their parents' shopping or the demand exceeds the available offer.

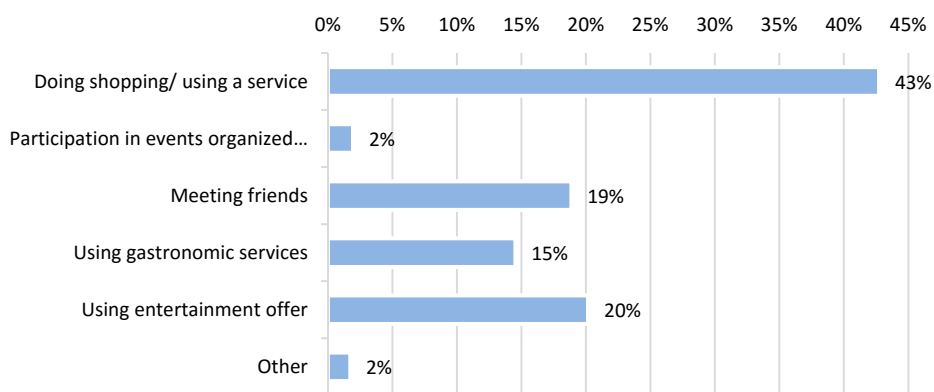


Figure 2. Reasons for customers' visits in shopping centres in the Upper Silesia Urban Area Region in 2015

Source: own study on the basis of the conducted research ($n=259$).

Definitely most frequent reason for visiting shopping centres is doing shopping and using a service offer, which is shown in Figure 2. In the conducted survey this aim was declared by 43% respondents, which at the same time confirmed hypothesis no. 3. 20% of the respondents answered that most often they visit a shopping centre to take advantage of the available entertainment offer, and 15% of the surveyed people decide to visit it because of gastronomic services. Meeting friends is one of the most important factors influencing the respondents' decision to visit a shopping centre and it was chosen by 19%. The reason most seldom indicated in the survey questionnaire was organizing an event in the commercial facility by the managers. Only 2% of the respondents chose that answer. Such low percentage of people indicating the participation in events in comparison with the other answers can be justified by the fact that some shopping centres occasionally organize various events, concentrating more on its basic activities. Some respondents (2%) also indicated other reasons for their visits in shopping centres. Among additional reasons, a wish to use the work zone or attending a business meeting occurs. What is more, the respondents in this group indicated the lack of more attractive, alternative activity. This

category also includes the use of the closeness of a shopping centre while waiting long for the city means of transport. Some of the respondents attribute a passage function to a shopping centre, treating the facility as the passing route to a bus or rail station. An example of a shopping centre fulfilling the passage role is Galeria Katowicka (Katowice Shopping Centre).

The next question referred to the interest of shopping centre customers in individual lines of trade. The question did not limit the number of responses. The obtained results are presented by means of Figure 3.

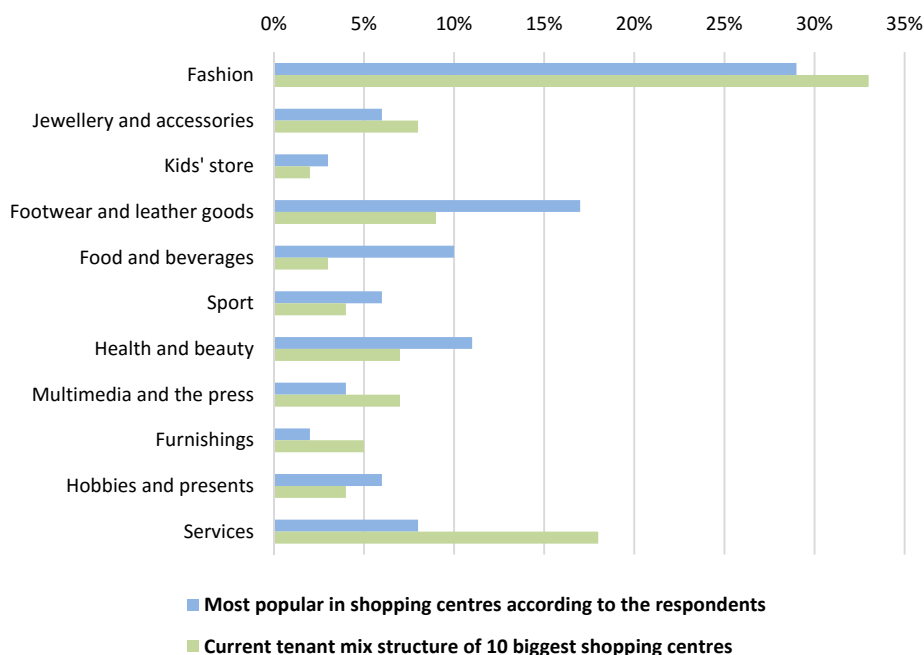


Figure 3. A comparative analysis of the popularity of trades according to the respondents and current tenant mix in 10 biggest shopping centres in the Upper Silesian Urban Area Region in 2015

Source: own study on the basis of the conducted research ($n=259$).

Among the surveyed group, the biggest percentage (29%) indicated the interest in the fashion trade. A relatively big share reflecting the customers' preferences was also obtained by the footwear and leather goods trade. The remaining trades enjoy moderate interest among the respondents, and among subsequently mentioned by the respondents there are: health and beauty (11%), food and beverages (10%) and services (8%). Even fewer people pointed out to hobbies and presents, as well as jewellery and accessories - 6% each. The multimedia and the press category, as well as kids' stores obtained a very low result, on the level of 3-4%. Stores offering furnishings enjoy the least interest among the respondents, selected only by 2% of the respondents.

What arises from the research is that the averaged tenant mix in the trade approach occurring in 10 biggest shopping centres in the Upper Silesian Urban Area Region (Figure

3) largely corresponds with customers' expectations. Differences of 3% should be regarded a standard and they include the following industries: jewellery and accessories, kids' stores, sport, multimedia and the press, furnishings and hobbies and presents. An insufficient offer in the current offer of 10 biggest shopping centres occurs with regard to shoe and leather goods stores, food and beverages, and health and beauty stores. On the other hand, the excess of shops currently located in shopping centres concerns fashion and service outlets.

The next stage in the conducted data analysis employed the Analytic Hierarchy Process. As a result, a model was formed which attributes to each of the factors the weight reflecting the influence of the determinant on the choice of a shopping centre by the customer. The obtained results were normalized with the use of the Super Decisions tool, which is presented in Figure 4.

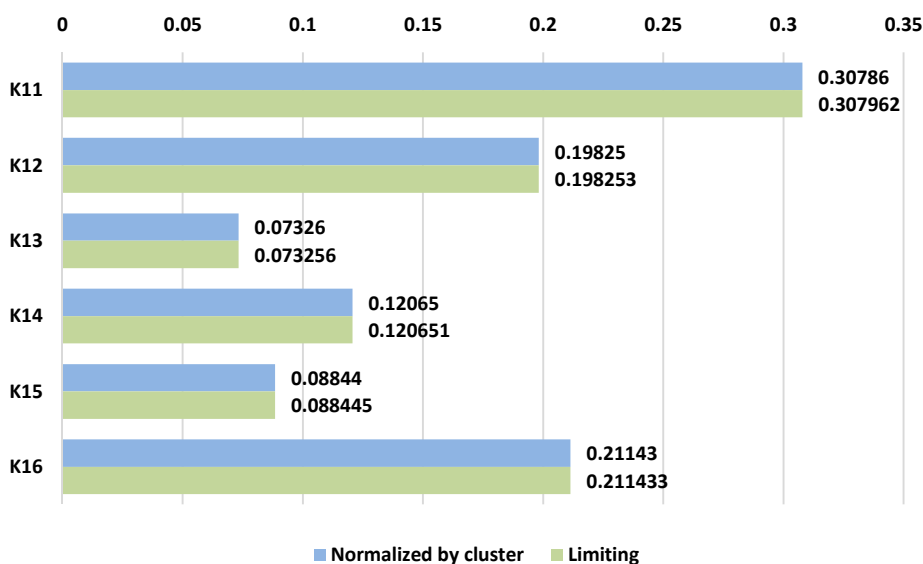


Figure 4. The priorities of the customers of shopping centres in the Upper Silesian Urban Area Region as for tenant mix structure in 2015

Source: own study.

Analysing respondents' preferences, it is observed that the most important of the analysed factors determining the choice of shopping centres is the number of shops. Then, the respondents prioritize the presence of well-known brands and trade diversification in a shopping centre. On the other hand, the fulfilment of the entertainment and gastro-nomic function by a shopping centre is less important from their perspective. The respondents attribute the least importance to trade specialization.

With the use of the Super Decisions tool, the Consistency Ratio was also designated. In accordance with the recommendations, the maximum value not exceeding 10% is allowed. The condition in the Analytic Hierarchy Process was fulfilled (Prusak *et al.*, 2014).

CONCLUSIONS

The research confirmed that to a great extent the valid tenant mix structure in the surveyed shopping centres meets with friendly attitude of customers, however, there are areas which improvement can increase the visitors' satisfaction. Moreover, it was proven that shopping remains the main reason for customers' visits in shopping centres, in spite of extending the offer of this type of places with new functions. Therefore, real estate managers are recommended to take actions aiming at increasing competitiveness on the market via the extension of the proposed shopping offer and their adjustment to customers' expectations. For the managers, the results of the conducted research mean the lack of the necessity for radical transformations, and the process of transforming Polish shopping centres into facilities of the fourth and fifth generation, which is slow in Poland, is, as it turns out, not necessarily expected, since customers identify shopping centres mainly with their traditional function.

The conducted research also indicates certain discrepancies in customers' expectations towards currently valid trade structure. A necessity of even bigger adjustment of the shopping centre structure considering visitors' preferences is confirmed. The biggest differences between preferences and the current state concern service outlets, and for real estate managers it is a signal to decrease their number. Next, managers are recommended to increase the number of footwear and leather goods stores and those offering food products, as well as health and beauty ones. Moreover, a view prevailed among the respondents about a necessity to place stores operating in one trade in close distance from each other, establish cooperation with a bigger number of brands and raise the number of stores offering men's fashion. However, not all recommendations must be reflected in designing tenant mix. It should be remembered - in accordance with the presented theoretical deliberations - that locating stores representing one trade in close neighbourhood can contribute to diminishing trade turnovers of shopping centres. A necessity to cover a considerable distance between selected stores sometimes makes the customer visit other outlets being "on the way". Another aspect which hampers taking adequate actions aiming at the reduction of the level of dispersion of stores belonging to one trade is the resistance of tenants due to fierce competition in the case of close neighbourhood of brands competing with each other. However, recently this trend is becoming reversed. Although the authors did not undertake research into the placement of individual stores and trade allocation within shopping centres, it was noticed based on own observations that recently built facilities more and more often take those critical remarks into consideration. An example of a shopping centre in the Upper Silesian Urban Area Region which used the idea of the placement of stores of individual trades in relatively close neighbourhood on one floor is Galeria Katowicka. This change in the allocation of tenants is positively perceived by consumers and in comparison with the remaining real estate it is a distinguishing feature. It is obvious that planning tenant mix in an already existing facility is characterized by definitely less flexibility than in the case of only emerging real estate. Therefore, for managers of commercial units already operating on the market, radical changes within the scope of adopting to customers' expectations are a challenge. The next issue tackled by customers in the context of the necessity to make changes concerns a bigger number of new brands. The general trend occurring in Poland shows that each year the number of

brands is increasing. What results from market reports (Retail Research Forum) is that the majority of brands debuting on the Polish market decide for the location key centres in Poland, especially in Warsaw. The challenge of managers of commercial real estate is to compete for new brands which will make the centre offer more attractive. Due to the fact that customers expect comprehensive service provision from a shopping centre, the extension of the offer to include service providers not occurring in the facility so far is worth considering. In order to do this, a necessity arises to take actions promoting the facility and create an attractive offer for potential tenants which would consider discounts and benefits from the lease in a given facility. The above activities make sense if they are supported by a carefully planned information campaign. Customers of shopping centres expect current information on the conducted changes. Consumers informed in advance are able to prepare for modifications of tenant mix. An example of a well-organized information action enabling to get familiar with new brands is the creation of a website by one of Katowice shopping centres, totally devoted to the issue of a change in tenant mix structure.

To sum up, it should be stated that in the course of the research, all three research hypotheses were confirmed and the research objective was achieved. The main limitation of the research is a not fully representative sample. Unrepresentative sample makes the lessons learned applicable only to the respondents and cannot be generalized to the entire population. Despite this limitation the paper can initiate discussion on the tenant mix structure for the current shopping centres in Poland. Moreover in the future it is recommended to extend research related to tenant mix structure to include more detailed deliberations on efficient space allocation (both size and number) in Polish shopping centres.

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Selection of Façades Finishing Technology for a Commercial Building Using Multi-Criteria Analysis

Agnieszka Leśniak, Jakub Balicki

ABSTRACT

Objective: The objective of this paper is to present and evaluate selected variants of façade finishing technologies for one-storey commercial buildings. The economic analysis, a quantity take-off and cost estimate for three façades was conducted.

Research Design & Methods: The multi-criteria analysis was performed. The authors proposed five technical and economic criteria. Four methods of data encoding were used.

Findings: The best solution among the three variants of façades proposed is a masonry façade from clinker brick. This variant was also the cheapest one. The results obtained show that a multi-criteria analysis depends strongly on the weights of the criteria and also on the methods of data encoding.

Implications & Recommendations: The authors indicated the role of façades. The façade should become an integral part of the architectural form of the building and participate in a dialogue with the surrounding buildings. For this reason, the choice of a façade is important. Investors should consider different possible solutions taking into account various criteria.

Contribution & Value Added: The originality of this work lies in studying certain aspects of the investors' decision making process concerning building technologies. The paper is about façade finishing technologies and presents possible solutions. The choice of the best one should not be based only on the lowest cost.

Article type: research paper

Keywords: multi-criteria analysis; façades finishing technologies; cost estimation

JEL codes: R30, C60

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INTRODUCTION

Façades should create an integral part of the architectural form of the building. Because of the fact that facades are judged by a large collection of observers, they constitute one of the most important parts of the building. The first impression formed after looking at the façade of the building significantly influences the further perception of the building. The façade can participate in a dialogue with the surrounding buildings or provide an independent entity detached from the environment in which it is located.

Crum (1973) describe a façade as the external wall of the building with all elements appearing on it. Moreover, he suggests that façades, together with the roof, are the synonym of the building external envelope designed to fulfil this role for about 20 years of the expected lifetime. Over the centuries, styles of building finishing have evolved but façades were still heavily influencing the development of the interior until the time of modernism when, according to the contemporary trends, designers decided to break with this approach. Nowadays, it ever-frequently happens that builders are trying to turn their buildings into new symbols and characteristic points of the city without taking into account their function and the surrounding environment. For this reason, for centuries the issue has aroused controversy, not only among designers and builders, but also among ordinary people who are the users and observers of the surrounding buildings.

The purpose of this article is the presentation and evaluation of selected variants of façade finishing technologies – the older and more well known, as well as the modern and not so popular ones. The authors decided to carry out a technical and economic analysis on the example of a commercial building. A multi-criteria analysis based on selected criteria that point out the most appropriate façade finishing technology for the building was conducted.

BUILDING FAÇADE: FUNCTIONS AND TYPES

According to Komar and Tymkiewicz (2006), one can distinguish three main functions of the façade:

1. Protection and shielding. The function of the façade that is of vital importance involves the protection of the interior against unfavourable environmental factors. The needs associated with this function have changed over the centuries. In the Middle Ages it was necessary to protect buildings against invaders' attacks. Therefore, the crucial buildings had massive form with thick walls and small openings for shooters. Today, the main purpose of the construction industry concerning façades is to improve such parameters as thermal transmittance, fire resistance and proper acoustics.
2. Information. In the case of informational features of façades, they should first of all enable the identification of the main functions of the facility and also cause feelings appropriate to that function (Bojęś, 2000). It is also welcome when the façade gives the onlooker the ability to estimate the time in which the building was built. A clearly defined style in which the building is erected can help with that. The façade should express the prestige and status of the building and the social position of its owner. Therefore, in the case of a public building, such as the court, the façade can usually be

- expected to be quite simple and in subdued colours. On the other hand, in the case of an office centre, a complex form and large plates of glass are typically most expected.
3. **Aesthetics.** Façades play a representative role; they are a kind of the ‘packaging’, so that the building attracts the attention of potential buyers or tenants. The aesthetic quality of the building is built primarily by the structure form, the placement and size of windows, as well as the appropriate selection of colours and properly matched details. One cannot forget about the proper state of repair which has a crucial influence on the perception of the building.

The contemporary façade can be divided into five main groups, as shown on Figure 1.

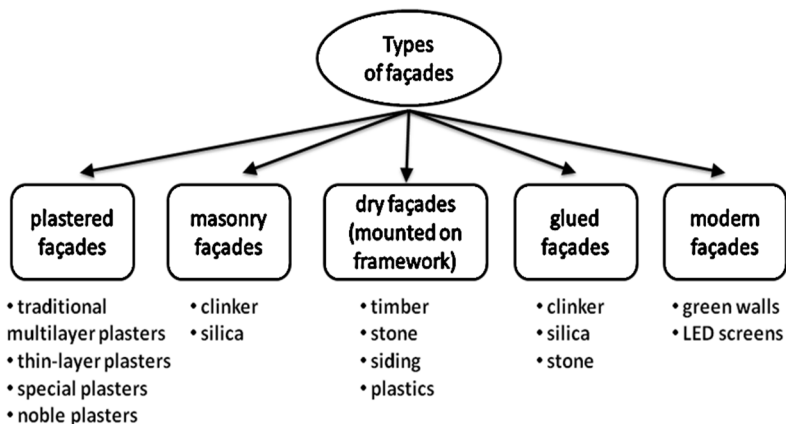


Figure 1. Types of façade

Source: own research based on (Bojęś, 2000; Komar & Tymkiewicz, 2006).

External plasters act as a barrier against negative external influences - humidity, rain-fall, temperature changes, UV radiation and chemical attack. They improve thermal insulation properties and the aesthetics of the building. Plasters protect walls against mechanical damage and fire. A basic division of plasters may be conducted with regard to the type of the binder used, thickness and method of applying.

Even though masonry façades have been known for centuries, they do not lose their popularity and are still very often used for finishing buildings. The reasons for this are numerous advantages of bricks (e.g. consist of natural materials, require very little maintenance).

Dry façades, mounted on the framework, can be divided according to the material used. Timber façades are one of the oldest methods of protecting exterior walls. The life-time of wood depends largely on its resistance to fungi and insects. As a result, regardless of the type of wood used on the façade, all wooden elements that will be used should be first impregnated with preparations protecting against moisture, fungi and fire. Façades made of any kind of stone, whether natural or artificial ones, are genuinely decorative and create an attractive image of a building. For this reason, stone façades are mostly designed for representational fragments of building façades (Young et al., 2003). Siding was very popular in Poland in the 1990s. Although it has become relatively out of fashion, it is still

a popular choice for both new buildings and renovating old ones. Plastic panels are becoming more and more popular nowadays. Their use enables courageous architectural concepts, while maintaining costs under adequate control and providing short realisation time. Panels are available in a variety of formats; they are characterised by the ease of installation and maintenance, fire resistance, durability and exceptional resistance to atmospheric conditions.

Currently, glued façades are increasingly replacing those made of brick and stone. This is caused by the fact that tiles are much thinner and lighter than bricks. The façades made of tiles are suitable for both new and older buildings which are being renovated. The plates, depending on the material from which they are made, may have a smooth or rough surface. Tiles can be laid on the walls of cellular concrete, reinforced concrete and walls finished with lime-cement plaster. They can also be placed on polystyrene and cement-fibre boards.

Modern façades classes include green walls (Kibert, 2008; Perini & Rosasco, 2013; Zieba et al., 2013; and LED screens (Schoch, 2006; Wiethoff, 2012). Green walls can reduce temperature fluctuations at the surface of the wall and, as a result, reduce the flow of heat between the walls of the building. This reduction is caused primarily by creating a buffer against wind during winter months, trapping a layer of air within the plant mass and reducing ambient temperature via evapotranspiration and shading. LED light is becoming increasingly appreciated and used in architecture. The building façade can be transformed into a multimedia screen on which one can create dynamic lighting scenarios, inscriptions and logos.

Careful designing of a building façade is one of the most important methods of saving energy (Shameri et al., 2011). Energy consumption, thermal comfort and condensation for a typical office building depend on the facade system (Hien et al., 2005; Gratia & De Herde, 2007). The worldwide fast development of building-integrated solar technology has prompted the design alternatives of fixing the solar panels on the building façades (Chow et al., 2007).

SELECTED VARIANTS OF FAÇADE FINISHING TECHNOLOGIES FOR THE COMMERCIAL BUILDING

The authors proposed a one-storey commercial building for which it would be possible to compare selected technologies of façade finishing. Three variants of façade finishing technologies were prepared:

- Variant I – a masonry façade from clinker brick. Clinker brick was selected for comparison because it is now very popular both in the case of new buildings and restored ones. This material and its properties are well known to investors. They often choose it because of its very good thermal parameters and the aesthetic value. The clinker wall, together with a load-bearing wall, thermal insulation and ventilation gap, forms a multi-layer wall.
- Variant II – a dry façade from concrete brick. The system consists of a supporting structure fixed to the load-bearing wall and a layer of concrete bricks supported by the framework. The supporting structure may be made of steel, steel combined with wood, wood or aluminium. Between the load-bearing wall and the concrete brick layer there is enough space where one can put thermal insulation and provide a ventilation gap.

- Variant III – a dry façade from composite panels. The system consists of a supporting structure made of aluminium profiles and composite panels. The panel consists of two layers of aluminium permanently connected with the core made of the mixture of polyethylene and aluminium hydroxide or mineral filler. The entire structure of the façade is characterised by its low weight. Panels may be mounted to the framework vertically or horizontally.

Cost Estimation of the Proposed Variants of Façade Finishing Technologies

Bills of quantities for the selected variants were prepared according to catalogues: KNR 202 (for variant I), NNRNKB 2-02 (for variant II) and KNR 18 (for variant III) used by analogy. The amount of works was the same in all variants - 191.70 m².

Financial basis used for calculations :

- Labour cost (R) - 20 PLN/w-h.
- Materials (M) and equipment (S) prices were taken from the market or the price publications. Costs of purchases of materials are included in the prices of materials.
- Indirect costs (Kp) - 60 %(R+S).
- Profit (Z) - 20 %(R+S+Kp).

The results of cost estimation are shown in Table 1 and Figure 2.

Table 1. Summary of the cost calculation for the selected variants of building façades

Variant	Reference to catalogue	Quantity of works [m ²]	Unit price [PLN]	Estimated costs [PLN]
Variant I masonry façade from clinker brick	KNR 202/103/4 (by analogy)	191.70	278.86	53,457.26
Variant II dry façade from concrete brick	KNR 202/2007/4 (by analogy) NNRNKB 202/2141/3 (by analogy)	191.70	304.97	58,463.68
Variant III dry façade from composite panels	KNR 18/2611/1 (by analogy) KNR 18/2613/3 (1) (by analogy)	191.70	475.91	91,233.07

Source: own research.

When analysing Table 1 and Figure 2, it can be seen that the difference in cost is not significant between variants I and II, and amounts to 9%. The cheapest is the façade made of clinker bricks and the most expensive one is variant III: a dry façade from composite panels. The unit cost of façades per 1m² is presented in Figure 3.

The direct costs of the execution of the selected façade finishing technologies are presented in Figure 4. A slight difference in cost between clinker brick and concrete brick follows mainly from higher labour required in the case of dry façade from concrete brick technology (PLN 10,952.97), while the cost of materials is almost the same for both. It is easily noticeable, however, that the main cost generating factor in the case of composite panel technology is the cost of materials (PLN 74,878.02), exceeding the same type of

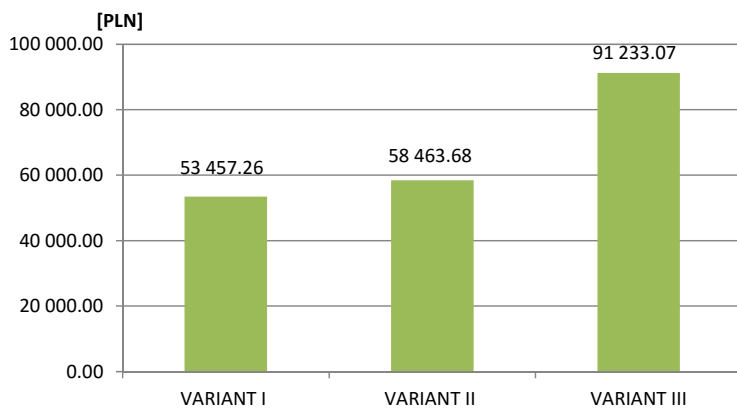


Figure 2. Comparison of the total costs for selected façade finishing technologies
Source: own research.

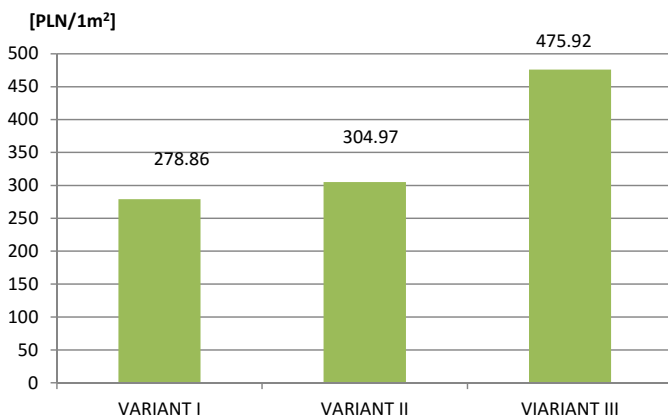


Figure 3. Comparison of the unit cost per 1m² for selected façade finishing technologies
Source: own research.

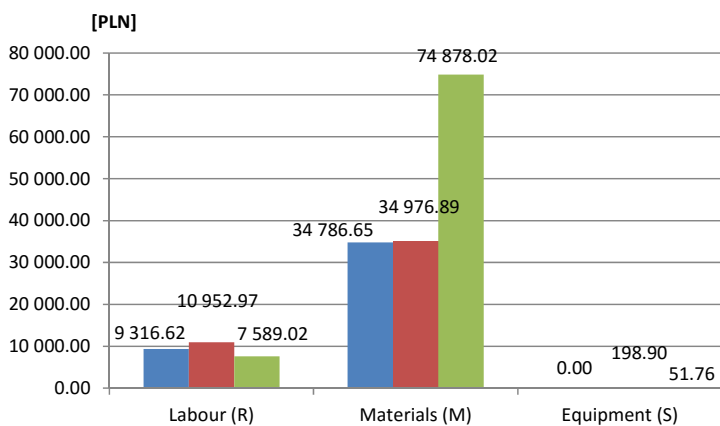


Figure 4. Comparison of the elements of direct cost according to the variants
Source: own research.

costs in other technologies more than twice. At the same time, the price of labour (PLN 7,589.02) is much lower for variant III than for its competitors. When it comes to the cost of equipment, only variant I and variant II generate costs in this matter (Figure 4).

A MULTI-CRITERIA ANALYSIS FOR SELECTED FAÇADE FINISHING TECHNOLOGIES

The wide applications of multi-criteria tools facilitating decision making in the construction industry in Poland were presented, for example, in Antuचेvičiene et al. (2010), Marler and Arora (2004), Szwabowski and Deszcz (2001).

The methods of a multi-criteria comparative analysis include a class of algorithms that create a scalar whose numerical value becomes a synthetic evaluation index - so-called "mathematical methods" (Szwabowski & Deszcz, 2001). The corrected summation index is the most frequently used discrete multi-criteria method (Trzaskalik, 2014). The application of the synthetic evaluation indices requires a division of the evaluation criteria into stimulants which are positively correlated with the dependent variable, and negatively correlated destimulants.

To enable the comparison and evaluation of the variants, the chosen evaluations of the criteria should be given dimensionless quantities, due to which it is possible to compare not only the quantitative but also the qualitative features.

The procedure involves three steps:

1. determining the corrected values of criteria evaluations for individual variants (stimulant, destimulant),
2. determining the coded values of criteria evaluations for individual variants, determining the corrected summation index J_i according to formula (1).

$$J_i = \sum_{j=1}^m (z_{ij} \cdot v_j) \quad (1)$$

where:

- J_i - the synthetic evaluation of the i -th variant;
- m - the number of criteria;
- z_{ij} - the coded measure of the i -th variant in relation to j -th criterion;
- v_j - the weight of the j -th criterion.

To perform the multi-criteria analysis the authors proposed five criteria:

- cost per square meter – expressed in PLN; destimulant,
- frost resistance – represented by a number within the range 1-5, where 1 is the worst and 5 is the best; stimulant,
- maintenance possibility – represented by a number within the range 1-5, where 1 is the worst and 5 is the best; stimulant. It is important to be able to maintain the façade easily,
- warranty period – expressed in years; stimulant. The period during which repairs of any damage or defects caused by improper execution are the responsibility of the contractor,
- assembly time per square meter – expressed in hours; destimulant.

To avoid subjective assessment and determine the importance of each criterion a survey was performed. The respondents included investors and contractors. The way of the

survey execution was based on Crum (1973), involving a simple method of comparing each factor with others. The total number of points that the most important criterion can receive is equal to maximally $n-1$, where n is the number of criteria.

The final weight of each criterion is equal to the decimal fraction in which the numerator is equal to the total number of points received by a given criterion and the denominator is equal to the sum of points received by the 5 chosen criteria (279 points); for instance, the cost per 1m² achieved 69 points per total sum of 279 – it gives the weight equal to 0.247. The values of weights for all 5 criteria are presented in Table 2 and conclude the first step of the procedure.

Table 2. Weights of criteria used in multi-criteria analysis

No.	Criterion	Evaluation	Sum	Weight
1	Cost per 1m ² [PLN]	destimulant	69	0.247
2	Frost resistance [1-5]	stimulant	58	0.208
3	Maintenance possibility [1-5]	stimulant	54	0.194
4	Warranty period [years]	stimulant	49	0.176
5	Assembly time per 1 m ² [h]	destimulant	49	0.176
Σ			279	1.000

Source: own research.

To compare technologies one has to use some methods of data coding, because it is impossible to equate such specific factors as price and time. To encode the data four different methods were used to maximise the objectivity of the result, based on Szwabowski and Deszcz (2001): standardisation method, normalisation method, Neumann – Morgenstern method and Pattern method. For each method the weights of criteria remain constant.

The process of coding and determining the corrected summation index is presented only for the standardisation method. For the remaining items the results obtained are provided. A detailed description of the methods used can be found in Szwabowski and Deszcz (2001) or Dodgson et al. (2009).

According to Szwabowski and Deszcz (2001), the essence of the standardisation method is to replace the partial measurement x_{ij} by the deviation from the average value of the partial measures for all variants according to the criterion K_j related to the calculated values of standard deviation. Values are encoded, or standardised (Table 3), using the following formulas:

$$s^2 = \frac{(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_n - \bar{x})^2}{n} \quad (2)$$

$$s = \sqrt{s^2} \quad (3)$$

For stimulants:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{s_j} \quad (4)$$

For destimulants:

$$z_{ij} = (-1) \frac{x_{ij} - \bar{x}_j}{s_j} \quad (5)$$

where:

- n - number of variants;
- s^2 - variance;
- s - standard deviation;
- \bar{x}_j - mean value.

The values of particular criteria and their average values are presented in the form of a matrix in Table 3.

Table 3. Initial matrix for standardisation method

Variants	Stimulants*			Destimulants	
	Warranty period [years]	Frost resistance [1-5]	Maintenance possibility [1-5]	Cost per 1 m ² [PLN]	Assembly time per 1 m ² [h]
Variant I - clinker brick	30	4	4	278.86	2
Variant II - concrete brick	3	5	5	304.97	1.5
Variant III - composite panels	10	4	4	475.92	0.25
Average value	14.33	4.33	4.33	353.25	1.25

Source: own research (*based on information from commercial bulletins of materials producers).

Table 4. Standardised matrix

Variants	Stimulants			Destimulants		Summary indicators	Evaluation
	Warranty period [years]	Frost resistance [1-5]	Maintenance possibility [1-5]	Cost per 1 m ² [PLN]	Assembly time per 1 m ² [h]	J_i	
Variant I clinker brick	1.369	-0.707	-0.707	0.851	-1.019	-0.012	2
Variant II concrete brick	-0.991	1.414	1.414	0.552	-0.340	0.471	1
Variant III composite panels	-0.379	-0.707	-0.707	-1.404	1.359	-0.458	3
Importance	0.176	0.208	0.194	0.247	0.176		

Source: own research.

The conducted calculations and Table 4 show that Variant II - dry façade from concrete brick has the best evaluation. The results of the multi-criteria analysis for the other methods of encoding are presented in Table 5.

Thus, a question arises about the type of technology to choose eventually. To provide an answer, the authors decided to develop a coefficient taking into account the results from all four methods simultaneously. This coefficient is simply obtained by summing up the

Table 5. Matrix encoded using different methods

Variants	Stimulants			Destimulants		Summary indicators	Evaluation
	Warranty period [years]	Frost resistance [1-5]	Maintenance possibility [1-5]	Cost per 1 m ² [PLN]	Assembly time per 1 m ² [h]	J_i	
Importance of criteria	0.176	0.208	0.194	0.247	0.176		
Normalization method							
Variant I clinker brick	1.000	0.800	0.800	1.000	0.125	0.767	1
Variant II concrete brick	0.100	1.000	1.000	0.914	0.167	0.675	3
Variant III composite panels	0.333	0.800	0.800	0.586	1.000	0.701	2
Neumann - Morgenstern method							
Variant I clinker brick	1.000	0.000	0.000	1.000	0.000	0.423	2
Variant II concrete brick	0.000	1.000	1.000	0.868	0.286	0.667	1
Variant III composite panels	0.259	0.000	0.000	0.000	1.000	0.222	3
Pattern method							
Variant I clinker brick	0.698	0.308	0.308	0.400	0.097	0.362	1
Variant II concrete brick	0.070	0.385	0.385	0.366	0.129	0.280	3
Variant III composite panels	0.233	0.308	0.308	0.234	0.774	0.359	2

Source: own research.

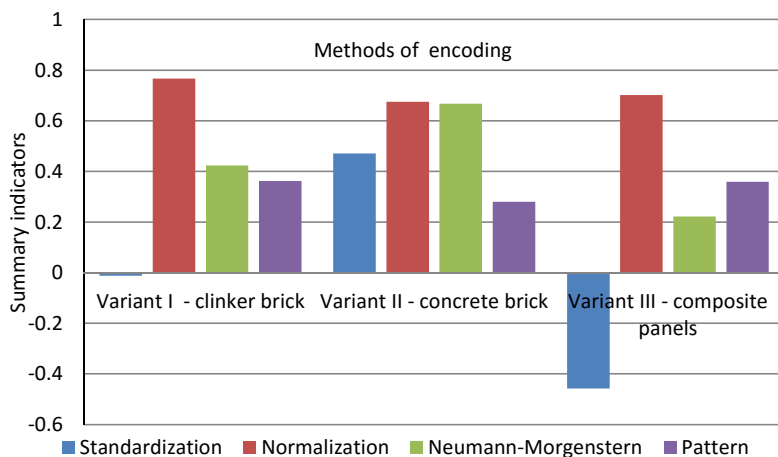


Figure 5. Comparison of multi - criteria analysis results according to the encoding methods

Source: own research.

points awarded for the places that technologies received according to each encoding method. 3 points were assigned for the 1st place, 2 points for the 2nd and 1 point for the 3rd place. The results obtained in this way (Table 6) show that ultimately clinker brick seems to be the best solution.

Table 6. Final evaluation of selected façade technologies

Variants	Standardisation method	Normalisation method	Neumann-Morgenstern method	Pattern method	Total sum	Final evaluation
Variant I masonry façade from clinker brick	2	3	2	3	10	1
Variant II dry façade from concrete brick	3	1	3	1	8	2
Variant III dry façade from composite panels	1	2	1	2	6	3

Source: own research.

CONCLUSIONS

The paper contains a comparative analysis of three variants of façade finishing technologies for a one-storey commercial building. The building has an area equal to 191.7 m² of walls to perform. This value was needed to prepare the bill of quantities and cost estimate for each technology. Due to the lack of catalogues related to the selected technologies, the authors used other catalogues by analogy. On the basis of cost analysis for all three technologies it can be concluded that the cheapest is the façade made of clinker bricks (PLN 278.86 per 1 m²). Variant III, dry façade from composite panels, is the most expensive one (PLN 475.92 per 1 m²).

To select the best among the three facade technologies proposed the multi-criteria analysis was conducted. Five criteria were used to assess the variants discussed: the warranty period, cost frost resistance, maintenance possibility, cost per 1m² and assembly time per 1m². Four different methods of encoding data were used. Depending on the method, different results were obtained. They show that a multi-criteria analysis depends strongly on the choice of the weights of the criteria. Also the methods of data encoding play an important role. The authors proposed a coefficient taking into account the results from all four methods simultaneously. This coefficient is simply obtained by summing up the points awarded for places that technologies received according to each encoding method.

The results obtained show that ultimately the best solution is a masonry façade from clinker brick. It should be mentioned that this variant was also the cheapest but the weight of criterion: costs per 1m² was the highest. The advantages of clinker brick include the following: durability, ease of maintenance, elegant appearance of the façade, very good acoustic properties, high frost resistance, fire and weather resistance, high water vapour permeability, low porosity, low water absorption and resistance to pollution.

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The Perception of Critical Success Factors for PPP Projects in Different Stakeholder Groups

Joanna Węgrzyn

ABSTRACT

Objective: The main goal of the research is to enhance understanding which factors are perceived as critical for the success of public-private partnerships (PPPs) by different stakeholder groups on different stages of the project life cycle.

Research Design & Methods: The paper builds on a larger research study looking at the development of the best practice framework for PPPs. The research is based on both a literature review and empirical studies. To examine the perception of critical success factors (CSFs) a questionnaire was conducted within different stakeholder groups for PPPs in Poland.

Findings: The article concentrates on one of the two dimensions of a PPP project success which is the idea of critical success factors. The research reveals that public and private parties do not share common perception of the PPP success. In general, the private sector assigns lower values to the CSFs analysed from the whole life perspective of a PPP project.

Implications & Recommendations: The research indicates that the interpretation of a PPP project success depends of the stakeholders' role in the project. Future research might try to integrate a wider range of stakeholders engaged in PPPs such as financial institutions or a final user of the services provided under a PPP project.

Contribution & Value Added: . The results of the study provides helpful information to identify areas that stakeholders should pay a special attention to in order to achieve the success of a PPP project.

Article type: research paper

Keywords: procurement; success; project management; critical success factors; public-private partnership; Poland

JEL codes: H11, L21, M19

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INTRODUCTION

The idea of cooperation between public authorities and private institutions in order to meet the growing needs of society has been developing through centuries. During that time a wide range of solutions has been implemented. One of these forms could be regarded as public - private partnership (PPP). However, the PPP formula itself was popularised relatively recently, because just at the beginning of the 1990s. Since then, the advantages of adopting PPPs have been widely documented. The experience gained in the area of PPP clearly indicates that the main reasons for partnerships are risk sharing and the ability of the private sector to deliver, finance, maintain, and operate a project at lower costs than the public sector (Savas, 2000, p. 34).

Unfortunately, a number of PPP projects have been performing below the expected level. The expected outcomes of PPP projects could be affected by a number of factors and their interactions during a project life cycle. These factors differ from stakeholder perspectives and their respective definition of project performance (Mladenovic, Vajdic, Wündsche & Temeljotov-Salaj, 2013, p. 230).

Considering the growing interest in PPP performance, many areas of project management have been explored. In particular, researchers focused on the identification of critical success factors (CSFs) for PPPs.

The aim of this study is to identify and evaluate critical success factors at different stages of PPP projects. The main goal of the research is to increase understanding which factors are perceived as critical for the success of PPPs by different stakeholder groups on different stages of a project life cycle. The research would also help to identify the areas that PPP stakeholders should pay attention to in the future to achieve the success of a PPP project.

The article is divided into four main parts. Firstly, the theoretical assumptions on the project success are presented. The second part describes the methodology of the research. In the third part the results of the conducted tests are presented and discussed. Conclusions and recommendations for further research are presented in the final part of the article.

LITERATURE REVIEW

Development of the Contemporary Concept of Public Private Cooperation

As witnessed in the last few decades, PPP comes in many shapes and sizes. Most common PPPs are perceived as a tool of providing infrastructure investments. This type of arrangement is organised around a design, finance, built, own, operate, transfer model and involves the private sector financing and the private sector project management capabilities.

However, even with this wide adoption, the term “PPP” may indeed mean different things to different people. If this is the case, as G. Hodge and C. Greve ask, then how might we build on this idea and develop a conceptual model in order to contribute to multiple jurisdictions and PPP debates around the globe?

G. Hodge and C. Greve suggest that “perhaps it makes sense to view PPP as being understood at many different levels” (Hodge & Greve, 2010). This idea can be formulated

in the way described below. (1) We might firstly view PPP as a specific infrastructure project; (2) as a management or project delivery reform; (3) as a governmental policy; (4) more broadly as part of the strong and capable private sector in a mixed economy; (5) or more broadly again, as part of the modern governance task. In this model, each of the inner perspectives of PPP exists within the context of others (see: Węgrzyn, 2015).

In the present research, the author adopts the first approach. That means that PPP will be analysed from a single project perspective. The adopted research approach enables to analyse the PPP issues in the context of organisation theory.

Polish Experience in PPP

The implementation of PPP projects in Poland began as late as in 2009. It is generally believed that that was a result of new PPP legislation which came into force in the early 2009 (Szymankiewicz, 2013). At that time, under the rule of the new regulations, 425 procedures for private partner selection were reported (in Poland, according to law regulations, four forms of a project contribute to these statistics: (1) PPP under the Public Procurement Act, (2) PPP under the Concession for Constructions Works and Services Act, (3) concessions for construction works, (4) concessions for services). The vast majority of procedures (about 70%) were announced by local governments (Nalepka & Węgrzyn, 2015).

Although public-private partnerships in Poland are a relatively young and promising investment model, they are still poorly developed (Belniak, 2008; Wojewnik-Filipkowska & Trojanowski, 2013; Śmiechowicz, 2014). By the end of 2012, only 105 out of all the procedures announced in the years 2009-2015 resulted in a private partner selection. This means that in 75% of cases these projects did not succeed. For comparison, in developing countries projects that failed (the proceedings were cancelled or the implementation of projects encountered financial difficulties) in the years 1990 to 2011 constituted less than 6.1% of the whole number of projects (based on the data about PPP projects carried out since 1990 by the World Bank, ppi.worldbank.org, access: 10.05.2013).

To cope with an increased number of PPP projects foreseeable in the near future, there is a strong need to study the practice of this method in Poland.

An Analytical Approach to the Problem of the PPP Success Criteria

The research model is built on several key ideas concerning the success of PPPs. Before these findings can be presented, a brief overview of the project success background needs to be established.

In the late 1960s, scholars, focusing on the operational side of project management, used to measure the success of a project in terms of cost, time and quality. In the 1980s they moved from the viewpoint of examining technical aspects of a project to focus on how the project is related to the client's organisation (Pinto & Slevin, 1988, pp. 67-73). Since then, the literature started to recognize the importance of success and its interpretation by various groups of stakeholders. However, those studies were not equipped enough with a clear definition of stakeholders (Davies, 2013). The attempts to fill the gap were taken by Turner, Müller and Zolin (e.g. Turner & Müller, 2006; Turner & Zolin, 2012) when they undertook research to determine whether there was any collective understanding of success within groups.

Nowadays, the literature is perceived to be more stakeholder-focused with a project success being dependent on the project life cycle (short term goals) and not on the wider

organisation (long term goals) (Turner & Zolin, 2012, p. 90). This suggests a gap to examine how the organisation views a project, thus combining short and long term goal angles.

Thus, a project success may indeed mean different things to different groups of stakeholders. For example, Huxham and Hibbert (2008) studying what makes PPPs successful or not, indicated five types of the PPP success. Those are: (1) achieving outcomes, (2) getting the process work, (3) reaching emergent milestones, (4) gaining recognition from others, and (5) acknowledging personal pride in championing a partnership. Each of these alternative dimensions is valuable and each brings different PPP characteristics into the spotlight.

Having defined the term of the PPP success, we can indicate that researchers distinguish two components of a project success (Turner, 2009, p. 12). Those are: (1) success criteria – the dependent variables by which the successful outcome is being judged (2) and success factors – the independent variables that will influence the successful achievement of the success criteria.

Therefore, the issue of a project success can be perceived from two opposite perspectives. Taking into consideration the first perspective, the emphasis is put on the issues of integrating the project objectives and measurable results. In the other approach, researchers focus on the factors that promote the achievement of the objectives set by the project which are usually defined as success factors.

This research relates to the other approach. That is why, it is worth mentioning that the discussion on the "success factors" was started by D. R Daniel (1961, p. 111). Important contribution to the development of the CSF concept was brought by J. Rockart's (1979, p. 32) works. Rockart found that CSF was a key area for the manager's action, in which favourable results are absolutely necessary to achieve the desired goals.

According to Rockart, the CSF concept helps the manager to determine those factors on which he or she should focus the management attention. It also helps to ensure that those significant factors will receive careful and continuous management scrutiny. It also reveals that some factors are temporal and that CSFs are manager-specific.

The most recognisable classification of success factors was elaborated by Pinto and Slevin (1987, p. 70). The authors divided a project success factors into ten groups shown in Table 1.

The idea of the CSF analysis is also well documented in the literature on PPPs, (e.g. Jefferies, Gameson & Rowlinson, 2002; Li, Akintoye, Edwards & Hardcastle, 2005; Tang, Shen, Skitmore & Cheng, 2012; Cheung, Chan, Lam, Chan & Ke, 2012).

Jefferies et al. (2002) examined the perceptions of BOOT schemes in order to develop a framework for critical success factors. Li et al. (2005) developed a list of 18 potential critical success factors (CSFs) for PPP/PFI construction projects in the UK. This 18 factors were divided into five groups: (1) effective procurement, (2) project implementability, (3) government guarantee, (4) favourable economic policy, (5) available financial market. The CSF concept has also been analysed at various stages within the PPP arrangement. For example, Tang et al. (2012) focused on the success factors at the briefing stages of PPP. The research contributes to the development of the best practice framework for PPPs. The attention has been given to developed, as well as developing countries employing the PPP policy to foster the infrastructure growth.

Table 1. Pinto and Slevin's (1987) success factor list

Success factor	Description
1. Project mission	Clearly defined goals and direction
2. Top management support	Resources, authority and power for implementation
3. Schedule and plans	Detailed specification of implementation process
4. Client consultation	Communication with and consultation of all stakeholders
5. Personnel	Recruitment selection and training of competent personnel
6. Technical tasks	Ability of the required technology and expertise
7. Client acceptance	Selling the final product to the end users
8. Monitoring and feedback	Timely and comprehensive control
9. Communication	Provision of timely data to key players
10. Trouble-shooting	Ability to handle unexpected problems

Source: Pinto and Slevin (1987).

MATERIAL AND METHODS

All CSFs are regarded 'critical'. However, as some are more important than others, it is reasonable to attempt to rank them.

The aim of the study was to answer the following research questions:

1. Which of the CSFs are perceived as crucial factors of the PPP project success in Poland?
2. Is there a difference in the evaluation of CSFs, depending on the stage on which the PPP is being assessed?
3. Is there a difference in the evaluation of CSFs among various stakeholders of the project?

In order to identify relevant CSFs, a wide range of research methods can be used. Among them, the following ones can be listed: realisation of case studies, group interviews, structured interviews, as well as the analysis of the relevant literature. According to Osei-Kyei and Chan (2015, p. 1339), there are two popular methods that can be used to identify success factors for PPP: a case study and questionnaire surveys.

In this study the questionnaire template designed by Li et al. (2005) was adopted. The author used the Likert scale and presented a ranking of CSFs according to the assigned mean values for those factors.

There are two important advantages arising from adopting Li's survey questionnaire, rather than designing a new one. Firstly, the value of Li's questionnaire has already been widely recognised by the industry at large (Cheung et al. 2012, p. 649). Secondly, by administering Li's questionnaire in different administrative systems, it might be of interest for comparison purposes in the future.

That is why, the five-point Likert scale (1-least important and 5 - most important), as described previously, was used to calculate the mean score for each CSF, which was then used to determine its relative ranking in descending order of importance. These rankings made it possible to compare the relative importance of the CSFs to the previous research.

A comprehensive literature review that was conducted to study the CSFs of PPPs leads to the observation that it is also worth investigating separately the problem of success factors at the briefing stage of PPP projects. That is why, Li's questionnaire was divided

into two stages – the first concerning CSFs at the briefing stage and the other concerning PPP in general (Li et al. 2005).

The questionnaire survey was administered in 2013 among organisations that have documented experience in PPP projects. As the data on the whole population of those organisations were not available, a purposive sample was chosen. The study was cross-sectional in nature and included various PPPs' stakeholders from all over the country. The questionnaire was sent to 76 public sector entities which initiated the PPP proceedings and 90 respondents whose contact details were obtained at conferences, PPP training courses and from a webpage on PPP topics. 52 completed questionnaires were returned. The basic statistics concerning all the respondents are presented in Table 2.

Table 2. Survey respondents' roles in PFI/PPP projects

Role	No	%*
Central government	4	8%
Local government	32	62%
Government agency	6	12%
Public enterprise	4	8%
Public sector	46	89%
Financier	7	13%
Main contractor	1	2%
Designer	1	2%
Subcontractor	0	0%
Consultant/adviser	14	27%
Operator	2	4%
Supplier	0	0%
Private sector	25	48%

*results do not sum to 100% because more than one answer was possible

Source: own elaboration.

RESULTS AND DISCUSSION

The relative importance of the 18 CSFs was explored by means of Likert rating scale questions in the survey instrument. The analysis of the survey response data obtained from both public and private sector representatives produced mean importance values for CSFs ranging from 3.19 to 4.64 (Table 3).

An appropriate division of risks was ranked first in the survey analysis. The average rating of CSF is higher for the answers given by the public sector representatives. In the original Li research this CSF was ranked as the second most important factor for achieving successful PPP projects. This suggests that in Poland managers perceive, similar to other countries, appropriate risk sharing mechanisms as a crucial factor contributing to

Table 3. Survey respondents' perceptions of the relative importance of CSFs for PPP projects on the basis of the questionnaire template designed by Li (2003)

CSF		Group	Total				Public sector				Private sector			
			Selecting priv. part.		Whole life approach		Selecting private part.		Whole life approach		Selecting private part.		Whole life approach	
			Mean	No	Mean	No	Mean	No	Mean	No	Mean	No	Mean	No
1	Transparent procurement process	effective procurement	4.56	4	4.14	7	4.61	3	4.26	7	4.40	6	3.73	8
2	Competitive procurement process		4.00	9	3.81	11	4.10	8	3.94	10	3.73	12	3.40	12
3	Good governance		4.02	8	4.06	8	3.97	9	4.19	8	3.93	9	3.67	10
4	Well-organised and committed public agency		3.31	17	3.37	16	3.26	18	3.45	16	3.07	17	3.00	17
5	Social support		3.83	12	3.89	10	3.74	13	3.77	13	4.13	8	4.00	6
6	Shared authority between the public and private sector		4.54	5	4.54	3	4.61	4	4.55	4	4.53	4	4.33	2
7	Thorough and realistic cost/benefit assessment		4.62	2	4.42	4	4.71	1	4.58	3	4.67	2	4.33	1
8	Project technical feasibility	project implementability	3.19	18	3.19	18	3.42	16	3.48	15	2.80	18	2.93	18
9	Appropriate risk allocation /sharing		4.64	1	4.65	1	4.65	2	4.77	1	4.80	1	4.27	3
10	Commitment/responsibility of public/private sectors		4.58	3	4.54	2	4.61	5	4.71	2	4.67	3	4.07	4
11	Strong and good private consortium		3.96	10	3.79	12	3.94	10	3.87	11	3.93	10	3.60	11
12	Favourable legal framework	4.42	6	4.35	5	4.45	6	4.48	5	4.33	7	4.07	5	
13	Government involvement by providing guarantees	government guarantee	3.46	16	3.21	17	3.42	17	3.26	18	3.47	16	3.07	16
14	Multi-benefit objectives		3.71	14	3.67	13	3.71	14	3.84	12	3.67	15	3.27	15
15	Political support	favourable econ. cond.	3.64	15	3.44	15	3.52	15	3.42	17	3.80	11	3.33	13
16	Stable macro-economic conditions		3.89	11	3.98	9	3.94	11	4.07	9	3.73	13	3.73	9
17	Sound economic policy		3.77	13	3.52	14	3.81	12	3.71	14	3.73	14	3.33	14
18	Available financial market		4.40	7	4.25	6	4.39	7	4.42	6	4.47	5	3.73	7

Source: own elaboration.

the PPP success. However, in Li's research a strong private consortium has been revealed as most important CSF. Surprisingly, this factor in Poland was scored on the 10th position. This could be an effect of the PPP market specificity. In the UK these are mainly large and well established construction companies which have won PFI contracts, whereas in Poland PPP projects are rather small and obtain attention rather from local and regional investors. Although all the CSFs are nominally considered to be 'critical', the factors that are grouped under the category: government support are not perceived to be so important as other factors. Additionally, three factors are regarded less important for a project success: project technical feasibility, well-organised and committed public agency and multi-benefit objectives. This results are comparable with regard to the answers obtained from public and private representatives.

Taking a general view on the CSF ranking list, it indicates that the respondents share a similar opinion on a relative importance of the PPP success factors. However, a closer analysis of the data may reveal important differences.

That is why, to find out whether these disparities exist, it was decided to adopt non-parametric methods. To determine if there is a statistically significant association between categorical survey responses, Wilcoxon signed rank test and Mann – Whitney U test can be used (see e.g. Meek, Ozgur, & Dunning, 2007). The chosen tests are based on ranking methods, that is, methods in which scores 1,2,3...n are substituted for the actual data in order to obtain a rapid approximate idea of the significance of the differences in the experiments (Wilcoxon, 1992, p. 196).

The following research problem concerns the potential differences between the CSFs depending on the stage of a PPP project. It needs to be highlighted that a given rank to each CSF depends on the stage of a PPP project on which this factor is the subject of assessment. That is why, it is reasonable to aggregate observations in pairs. The appropriate method to test the significance of differences of the means in this case is Wilcoxon signed-rank test. The summary of the results is included in Table 4.

Table 4. Summary of results for the Wilcoxon signed-rank test; $\alpha = 0.05$

Variable / Measure	Total	Public sector	Private sector
Wilcoxon test $T = \min\{\sum +, \sum -\}$	22.5**	84	2**
Efficient range of the sample n	16	18	17
Critical value for $\alpha = 0.05$	30	40	35

Source: own elaboration.

Wilcoxon test proves that significant differences between the mean evaluation of CSFs can be indicated in the whole group of respondents and in the group of private sector representatives. However, considering the obtained data for the public sector separately, it is suggested that the assessment given to each CSF does not depend on the project stage. These results indirectly indicate that these two parties may not share a common perception on PPP projects success or at least the project success criteria.

This leads us to the third research problem: whether any differences can be indicated in the evaluation of CSFs among various stakeholder groups of the PPP project.

In this case the analysis is concentrated on the potential disparities within the data distributions obtained from representatives of the public and the private sector. This research perspective justifies an assumption that all the observations from both groups are independent of each other. That is why to answer this research question Mann – Whitney U test was adopted (Nachar, 2008, p. 13). The results are presented in Table 5.

Table 5. Summary of results for the Mann – Whitney U test, $\alpha = 0.05$

Variable / Measure		Stages of PPP project	
		Selecting private partner	Whole life approach
Sum of ranks for public sector	R_1	341	403
Sum of ranks for private sector	R_2	325	263
Mann-Whitney U statistic	U	154	92
Mean value	$E(U)$	162	
Standard deviation	σ_v	31.607	
Z statistic	z	-0.253	-2.215**

Source: own elaboration.

The obtained data indicate that the null hypothesis that two samples have the same distributions cannot be rejected when we are considering the differences in the perception of CSFs on the initial stage of PPP. This difference becomes more clear when the assessment is concentrated on the whole life of a PPP project. In this situation the ranks given by the public sector representatives are higher than the rates obtained from the private sector.

CONCLUSIONS

In conclusion, this paper has presented an analytical approach to the assessment of a project success and the success criteria. As many scholars point out, there still exists a need for research in this area to overcome the lack of clarity when defining success and stakeholder impact (the perceived importance of a project success factors by different stakeholder groups) (Davies, 2014, p. 11). That is why, theoretical considerations were supported by empirical research on CSFs for PPP in Poland.

In answering the research questions, the analysis revealed that public and private parties had most in common in perceiving a relative importance of a project success on the initial stage of a PPP project. The research, however, identified some disparities in the evaluation of CSFs. The main issue highlighted was that when we are looking at the PPP project from the whole life perspective, the mean score values of responses given to each CSF are becoming divergent. Generally, the private sector assigns lower values to the CSFs analysed from the whole life perspective of the PPP project.

The fact that along with the implementation of a PPP project there may occur discrepancies in the perception of the project success, has important practical implications. The essence of PPP can be summarised as long-term commitment between the public and private sector entities to deliver an expected infrastructure service. That is why, to avoid any possible discrepancies in this process, appropriate measures should be taken at the initial stage of the project and it should find its expression in the contract.

The limitation of this research is that only two groups of stakeholders were taken into consideration. It is recommended to conduct future studies on a wider range of stakeholders engaged in PPPs, such as financial institutions or a final user of the services provided under a PPP project.

To sum up, the stress in the research was put on the factors that are critical to a PPP project success. Future studies may wish to explore more focused CSF templates as a device to clarify success factor relationships.

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Policies Towards the OFDI and IFDI in the European Union after the 2008+ Crisis

Marta Götz

ABSTRACT

Objective: The objective of this paper is to evaluate the (post)crisis FDI policies in Europe, taken the significant drop in international foreign direct investment (FDI) flows as observed in the aftermath of 2008+ crisis as well as the accompanying ideological shifts as to the role of the State in the economy.

Research Design & Methods: By synthesising the available sources – critical literature review, evaluation of rankings and scoreboards and experts' survey - this paper seeks to classify the EU member states according to their policies pursued towards outward and inward foreign direct investment (IFDI, OFDI) in the context of 2008+ crisis.

Findings: A matrix with four possible combinations of FDI policy has been proposed. It distinguishes: an open model with “a double positive strategy”, closed with “a double negative strategy”, competitive with “a positive outward and negative inward strategy”, and a capital model with “a positive inward, negative outward strategy”. Obtained results point to the dominance of two opposite models where countries seem to apply combinations of rather friendly IFDI (or OFDI) and unfriendly OFDI (or IFDI) policies.

Implications & Recommendations: Current scarcity of a proper metric of FDI policy has made it necessary to draw on some imperfect substitutes, hence findings must be treated with caution. Properly designed, reliable international database enabling cross-country comparisons in terms of FDI policies would certainly improve the quality of future research.

Contribution & Value Added: Presented research findings can be seen as a voice in the discussion on FDI policy in Europe, in particular on the issue of operationalisation of such policy.

Article type: research paper

Keywords: FDI; OFDI; IFDI; policy towards FDI; crisis; EU; classification

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INTRODUCTION

The significant drop in international foreign direct investment (FDI) flows as observed in the aftermath of 2008+ crisis and accompanying ideological shifts as to the role of the State in the economy as expressed by some European politicians and feared by scholars – “return of neo-protectionism” – have been the inspiration for conducting research on the interface of these two (Szalavetz, 2015; Gestrin, 2014; Götz, 2015; Evenett, 2012). The aim of this study has been to assess if policies towards FDI might have altered in the consequence of the economic downturn. Research has been undertaken to map the member states in terms of their approach towards incoming (IFDI) and outflowing (OFDI) investments. The applied methodology combines simple quantitative and qualitative techniques which draw on international databases and scoreboards and enables cross-country comparison. The classification of the EU countries with respect to the pursued FDI policies has been proposed.

Following the 2008+ financial turbulences, trade imbalances, instability of fiscal policies and labour market deterioration various measures have been launched to cushion the blow. Whereas major economic policies such as the fiscal, monetary or labour market policies have been respectively adjusted, relatively little is known about possible modifications in other less popular areas of government activity such as the policy towards foreign direct investment. By synthesising available sources this paper seeks to classify the European Union member states (EU MS) according to their policies pursued towards outward and inward foreign direct investment after 2008.

This paper is structured as follows. First part outlines the concept of FDI policy as proposed in selected literature. Next, the employed data being proxy of FDI policies and applied methodology enabling cross-country comparison are briefly described. Part three discusses the results obtained i.e. the EU countries classification and is followed by the conclusions which close the text.

LITERATURE REVIEW: FDI POLICY

In empirical studies on FDI, policy is modelled as one of the factors influencing investor’s decision on where to locate. In most cases this is one of the independent variables in regression equations which assess the magnitude of an impact of given element on FDI. Golub (2009) argues that despite its increasing prominence, very little systematic information is available on policies towards this FDI. “Unlike international trade where international comparisons of tariff and non-tariff barriers are widely available, there have been few previous efforts to quantify and systematically compare national policies towards FDI. Yet, indicators of the policy stance towards FDI are just as important as measures of trade barriers, given the prominence of FDI in the world economy and the policy debates surrounding FDI” (Golub, 2009, p. 1248).

The Oxford Dictionary (2015) defines “policy” as a course or principle of action adopted or proposed by an organization or individual. Policy discussions in the literature have been centered around government support for IFDI. Also, the economic impacts of IFDI have been widely discussed, while those of OFDI are far less recognised and understood (Gorynia, Nowak, Trąpczewski, & Wolniak, 2013). “In many countries, government

policies towards MNEs exaggerate the benefits of inward investment and understate the benefits of outward investment” (Casson, 2007, p. 323). According to Buckley, Clegg, Cross and Voss (2010, p. 244): “OFDI policy, in both developed and developing countries, is generally much more amorphous, diffused, and less clearly delineated in comparison with the policies towards inbound FDI.” Studies on FDI mostly deal with the policy in the context of general terms and conditions referring to the regime adopted by the host country usually affecting all companies and not discriminating a priori between domestic and foreign ones. Hence, such “FDI oriented policy” features frequently in empirical investigations (Bellak, Leibrecht, & Stehrer, 2010, p. 38).

For the sake of the clarity and brevity and given the space limitations the broader considerations on the conceptual aspects of FDI policy have been skipped, as they have been comprehensively covered in multiple studies (Jankowska, Gorynia, & Dzikowska, 2015; Faeth, 2009; Guimón & Filippov, 2012; Harding & Javorcik, 2011; Drahokoupil, 2008; Sauvant, 2015; Brewer, 1993; Cuervo-Cazurra & Genc, 2011; Hymer, 1976; Dowling & Pfeffer, 1975; Scott, 1995; Kline, 2002; Mistura, 2011; Ratten, Dana, Han, & Welpe, 2007; Torres, 2014; Globerman, Chen, 2010). Based on the critical review of available literature two approaches to FDI policy can be suggested. FDI policy drawing on the broad set of indirect measures is a policy *sensu largo*. *Sensu stricto* FDI policy encompasses dedicated measures with “foreign element” which per se seems a tricky political issue in the light of the EU regulations seeking harmonised and equal conditions for all European investors. It can be actually equated with the activity of Investment Promotion Agencies (IPAs) in case of inward FDI, and economic diplomacy (economic missions and activities of specialised economic, trade and investment departments of country's embassies) for outgoing FDI. The recognised deficiency as far as good proxies for genuine FDI policy are concerned, is further compounded by the problem of their dual use. Available variables – standardised, comparable and reliable for all EU members - may stand for conditions affecting incoming as well as outgoing investors as they fit the *sensu largo* definition of FDI policy.

MATERIAL AND METHODS: PROXIES FOR FDI POLICY

The objective of this paper has been to evaluate the (post)crisis FDI policies in Europe. The simplest categorisation of FDI policies would differentiate between OFDI and IFDI and between hostile/anti and friendly/pro FDI approaches. In the light of this deficit of FDI policies' variables, it has been inevitable to tap into other sources which can serve as proxies of outward and inward FDI policies. In the first step the review of possibly suitable databases has been conducted. Next, a number of indicators stored in the repositories of international organizations has been selected. In particular, reference has been made to: Investment Regulatory Restrictiveness Index (IRR) by OECD, Reform Responsiveness Index (RRI) by OECD, concluded Bilateral Investment Treaties (BITs) as provided by the EU and UNCTAD, launched claims under Investment State Dispute Settlement procedures (ISDS) reported by UNCTAD, ranking Doing Business of World Bank, the number of OFDI support centres provided by the EU Commission, corporate tax rates published by the US based Tax Foundation, Attractiveness' ranking available in the Global Competitiveness Report by World Economic Forum, Index of Economic Freedom, an annual guide published by The Wall Street Journal and The Heritage Foundation and indicators of discriminatory measures “harmful for foreign commercial interests” reported by the Global Trade Alert.

These elements inform either about the progress in reforms launched (RRI, Doing Business, taxes), international openness/closeness (BITs, IRR, freedom index, IFDI attractiveness, OFDI support centres), or observance of existing anti-discriminatory law (ISDS, Global Trade Alert). Selected indicators may serve as close proxies of FDI policy. Their choice has been guided also by their ability to trace the recent (post)crisis developments with respect to approaches towards foreign investors. It goes without saying that other additional and alternative sources could be useful. Hence, further research should certainly enrich current set of indicators by employing new variables.

For classification purposes the following technique has been adopted. Firstly, for rankings such as IRR, RRI, Doing Business, Tax rates, Freedom index or Attractiveness as measured by GCR, where it is in general possible to categorise country's policies according to the places occupied; countries best performing and/or recording the most positive changes have been classified as running "pro" FDI policy; laggards and/or these with deteriorating performance as running "anti" FDI policy. For each ranking the average value has been calculated which can serve as certain benchmark. Referring to this level enables sorting all countries in ascending order and classifying accordingly. Secondly, in case of bilateral investment treaties (BITs) and OFDI support institutions the categorisation reflects the total number of concluded agreements or officially registered facilities. It must be stressed that for BITs the evaluation takes into account also recently (in the aftermath of crisis) signed treaties. The average value of existing treaties can be regarded as a reference point for countries' categorisation. Thirdly, for irregular signal information such as the reported ISDS claims, or Global Trade Alert "naming and shaming" i.e. when some countries appear but some are not mentioned, for classification purposes it has been decided to regard countries with these negative notorious cases as pursuing "anti" FDI policies.

Countries assessed as positive (or negative) in the Global Trade Alert, countries posting fewer (or new and/or more) ISDS cases, countries which have concluded new BITs and whose total number of BITs is above (or below) the EU average, countries having a low (or high) Investment Restrictiveness Index and countries with above (below) the average EU score in GCR subindex on FDI attractiveness have been classified as running rather friendly (or hostile) policies towards incoming investors. The countries whose Reform Responsiveness Index is below (or above) the EU average, who have less (or more) than the EU average number of OFDI support centres, who have higher (or lower) than the average and increasing (or decreasing) corporate tax rates, whose Economic Freedom ranking is worsening (or improving) and whose Doing Business ranking is decreasing (or increasing) have been classified as pursuing rather unfriendly (or stimulating) policies towards outward FDI. Country's model i.e. the profile of its FDI policies is achieved by combining all collected proxies for IFDI and OFDI policies respectively.

RESULTS AND DISCUSSION: COUNTRY CLASSIFICATION

The adopted approach allows to distinguish four models of FDI policies a country hypothetically may pursue.

1. An open model with “a double positive strategy”, where both types of FDI are seen as making positive contributions to the economy. Hence, the policy is pursued with the aim of increasing the inflow of new foreign investors and fostering the internationalisation by domestic firms.
2. A closed model with “a double negative strategy”, where both outbound and inbound investment is associated with certain losses to the national economy. Adopted policy would reflect in such case the efforts to rather hamper the inflow of foreign newcomers and prevent venturing abroad by national companies.
3. A competitive model with “a positive OUT, negative IN strategy”, where the State seeks to promote domestic champions which will stimulate the rise of internationally competitive domestic companies while restricting foreign investment which is perceived as posing a threat to incumbent businesses.
4. A capital model with “a positive IN, negative OUT strategy”, where the State seeks clearly to promote capital accumulation, preventing the outflows of domestic businesses while attracting foreign investment.

Table 1. Summary of identified models of FDI policies

Open model	Capital model
2	7
Competitive model	Closed model
8	5

Source: own elaboration.

The proposed classification must be regarded with caution and should be seen as a rudimentary template enabling simple cross-country comparison in terms of rather neglected and underexplored policy domain i.e. policy towards FDI.

It must be stressed that conclusions on each country’s FDI policy and resulting classification draw on the set of selected variables – in most cases, due to the data availability and / or topic sensitivity - rather imperfect substitutes of FDI policy measures. Hence, results obtained must be treated cautiously and risk of possible misinterpretation must be taken into account. Properly designed reliable international database enabling cross-country comparisons in terms of FDI policies would certainly improve the quality of future research. Table 1 and 2 summarise the result for all 28 EU countries with respect to all proposed variables.

Based on the conducted research eight competitive models have been identified, seven capital models, five closed ones, and two open models (table 3). For 6 member states it has not been possible to diagnose a specific model given their unclear (neutral) stance towards certain FDI flows.

Conducted mapping of the EU MS in terms of pursued (post)crisis policies towards FDI shows that 10 EU countries has run friendly policy towards IFDI and 11 EU members the policy favourable towards OFDI. In general, the competitiveness model assuming stimulating OFDI while rather preventing IFDI has been applied 8 times; featuring second is the opposite capital model – detected among 7 countries. Open model has been adopted only by 2 and closed model by 5 member states.

Table 2. Summary of variables standing for FDI policies in the EU member states

Variables	GTA		ISDS		BIT		REG restr.	inward GCR	reform resp.	DB	HF	no.service providers	corpor tax rate + change		IFDI policy	OFDI policy
	neg	pos	incr/decr=const	new '14	to	recent										
Austria	-2	(-)	(.)	(.)	<avg.	3	high	>avg.	<EUavg.	decr	decr	<avg.	>avg.	const	anti	anti
Belgium	(-)	(-)	const	(-)	>avg.	6	low	>avg.	<EUavg.	decr	decr	>avg.	>avg.	const	pro	anti
Bulgaria	(-)	1	incr	(-)	>avg.	1	(.)	<avg.	(.)	decr	incr	<avg.	<avg.	const	pro	pro
Croatia	(-)	1	incr	(-)	<avg.	1	(.)	<avg.	(.)	incr	incr	<avg.	<avg.	const	anti	pro
Cyprus	-1	(-)	incr	new	<avg.	3	(.)	>avg.	(.)	decr	decr	<avg.	<avg.	incr	anti	anti
Czech R.	1	(-)	incr	new	>avg.	7	high	<=avg.	>EUavg.	incr	incr	<avg.	<avg.	decr	anti	pro
Denmark	(-)	(-)	(.)	(.)	<avg.	3	high	>avg.	<EUavg.	incr	decr	<avg.	>avg.	decr	~	anti
Estonia	(-)	(-)	const	new	<avg.	5	low	>avg.	(.)	decr	decr	<avg.	<avg.	decr	pro	anti
Finland	(-)	(-)	(.)	(.)	>avg.	2	low	>avg.	<EUavg.	decr	decr	<avg.	<avg.	decr	pro	anti
France	-5	1	incr	(-)	>avg.	4	high	<=avg.	<EUavg.	incr	decr	>avg.	>avg.	const	anti	~
Germany	-2	(-)	incr	(-)	>avg.	3	low	>avg.	>EUavg.	decr	incr	>avg.	>avg.	fluctu	pro	anti
Greece	(-)	(-)	incr	new	<avg.	(-)	low	<avg.	>EUavg.	incr	decr	<avg.	>avg.	fluctu	anti	anti
Hungary	-1	(-)	incr	new	<avg.	(-)	high	<avg.	>EUavg.	incr	decr	<avg.	<avg.	incr	anti	~
Ireland	(-)	(-)	(.)	(.)	<avg.	(-)	high	>avg.	>EUavg.	incr	decr	<avg.	<avg.	const	anti	pro
Italy	-5	(-)	incr	new	>avg.	3	high	<avg.	>EUavg.	decr	decr	>avg.	>avg.	decr	anti	~
Latvia	(-)	(-)	incr	(-)	<avg.	(-)	high	>avg.	(.)	decr	incr	<avg.	<avg.	const	anti	pro
Lithuania	-1	(-)	incr	(-)	<avg.	5	low	<avg.	(.)	incr	incr	>avg.	<avg.	decr	anti	pro
LUX	(-)	(-)	(.)	(.)	>avg.	(-)	low	>avg.	<EUavg.	incr	decr	<avg.	>avg.	fluctu	pro	anti
Malta	(-)	(-)	(.)	(.)	<avg.	4	(.)	>avg.	(.)	decr	incr	<avg.	>avg.	const	pro	anti
Netherl.	-1	(-)	(.)	(.)	>avg.	2	low	>avg.	<EUavg.	decr	decr	<avg.	>avg.	decr	pro	anti
Poland	-1	(-)	incr	(-)	<avg.	(-)	high	<avg.	<EUavg.	decr	incr	>avg.	<avg.	const	anti	pro
Portugal	(-)	(-)	const	(-)	<avg.	7	low	<avg.	>EUavg.	decr	incr	>avg.	>avg.	incr	pro	~
Romania	(-)	(-)	incr	new	>avg.	(-)	low	<avg.	(.)	incr	incr	<avg.	<avg.	const	anti	pro
Slovakia	(-)	(-)	incr	new	<avg.	8	high	<=avg.	<EUavg.	decr	decr	<avg.	<avg.	fluct	anti	anti
Slovenia	(-)	(-)	incr	(-)	<avg.	1	low	<avg.	(.)	decr	incr	<avg.	<avg.	decr	anti	pro
Spain	-1	(-)	incr	new	>avg.	3	low	<avg.	<EUavg.	decr	decr	>avg.	>avg.	decr	anti	anti
Sweden	(-)	(-)	(.)	(.)	>avg.	(-)	high	>avg.	<EUavg.	incr	incr	<avg.	<avg.	decr	pro	pro
UK	-1	(-)	incr	(-)	>avg.	3	high	>avg.	>EUavg.	incr	decr	<avg.	<avg.	decr	~	pro

*data as available in October 2015, ~ unclear - pro and anti measures offset each other; New 14 – new ISDS cases brought in 2014 as reported by UNCTAD > -means more than average, < - lower than average;

(-) - the phenomenon did not occur; (.) - data not available

Source: own elaboration.

Table 3. Diagnosed models of FDI policies by country

Policy towards IFDI	Policy towards OFDI	Country	Suggested Model
unfriendly	unfriendly	Austria	Closed
friendly	unfriendly	Belgium	Capital
friendly	friendly	Bulgaria	Open
unfriendly	friendly	Croatia	Competitive
unfriendly	unfriendly	Cyprus	Closed
unfriendly	friendly	Czech Republic	Competitive
~	unfriendly	Denmark	Closed/ capital
friendly	unfriendly	Estonia	Capital
friendly	unfriendly	Finland	Capital
unfriendly	~	France	Closed/competitive
friendly	unfriendly	Germany	Capital
unfriendly	unfriendly	Greece	Closed
unfriendly	~	Hungary	Closed/competitive
unfriendly	friendly	Ireland	Competitive
unfriendly	~	Italy	Closed/competitive
unfriendly	friendly	Latvia	Competitive
unfriendly	friendly	Lithuania	Competitive
friendly	unfriendly	Luxembourg	Capital
friendly	unfriendly	Malta	Capital
friendly	unfriendly	The Netherlands	Capital
unfriendly	friendly	Poland	Competitive
friendly	~	Portugal	Open /capital
unfriendly	friendly	Romania	Competitive
unfriendly	unfriendly	Slovakia	Closed
unfriendly	friendly	Slovenia	Competitive
unfriendly	unfriendly	Spain	Closed
friendly	friendly	Sweden	Open
~	friendly	United Kingdom	Open/competitive

Source: own elaboration.

An interesting observation can be inferred from the conducted research and mapping process. Namely that “old EU” MS seem to pursue policies more friendly towards incoming FDI and have rather unfriendly attitude towards OFDI; whereas the opposite is true in many Central and East European Countries (CEEC). Competitiveness model seems to be the most widespread among CEEC and new MS, whereas capital model is popular particularly among “old EU” advanced members. Whether it reflects just the policy evolution and can be somehow referred to the Dunning’s Investment Development Path (IDP) or has some other deeper reasons would be an interesting research area for further studies.

The policy mix typical for given model (IFDI & OFDI) may reflect the deliberate combination of strategies adopted towards IFDI and OFDI. They would then derive from the underlying perception of international capital flows. Whether OUTFDI is seen as loss of precious capital and jobs or as a factor contributing to the national economy by improving country’s competitiveness and seen as a way to create own multinationals / TNCs.

Whether INFDI is perceived as so wanted capital and labour creation or as unwelcome competition and threat to the domestic firms. I would not, however, go that far and argue that generated classification and models assigned to the member states can be seen as manifestation of their preferred policies. These models are rather evidence of actual approaches taken towards incoming and outflowing investors in recent (post)crisis years. In other words, running unfriendly policies towards incoming and outflowing investors does not have to imply that government considers such flows as a threat for home economy or distortion for domestic competitiveness. Such lack of evident “1 to 1” translation between the policy understood as the country development strategy and a daily policymaking is nothing new since “rhetoric” and “practice” often diverge. Other studies in the context of recent crisis point also to some incoherence where bold anti-liberal declarations did not trickle down to actually implemented actions (Aalbers, 2013, p. 1083; Sellar, Pástor, 2015, p. 352; Szalavetz, 2015).

CONCLUSIONS

Obtained results of the mapping of the EU MS in terms of pursued (post)crisis policies towards FDI show that merely ten EU countries have run clearly friendly policy towards IFDI and eleven EU members have opted for policy favourable towards OFDI. In general, the competitiveness model assuming stimulating OFDI while rather preventing IFDI has been applied eight times. The opposite capital model has been detected among seven countries. Open model has been adopted only by two and closed model by five member states. Presented research findings can be seen as the voice in the discussion on FDI policy in Europe, in particular on the issue of operationalisation of such policy.

Presented findings can contribute to the research on FDI, in particular to the less pronounced and touched upon in the literature issues of FDI policies. There has been identified a clear need for designing and developing the set of comparable indicators being proxies of genuine FDI policy. They would enable conducting international comparative studies with the aim to assess policies pursued towards incoming and outflowing investment. Current scarcity of the proper metric of FDI policy made it often necessary to draw on some imperfect substitutes. Dual use of available indicators manifests itself in the fact that they can serve as proxies of both IFD and OFDI policies. Hence this project leads to the conclusion that some differentiation between genuine and narrowly defined policy towards FDI (*sensu stricte*) and just FDI-related policy (*sensu largo*) would be recommended. Existing bias towards inward FDI dominating in the literature and empirical studies poses also some challenge and should be addressed by scholars. Hidden protectionism, more nuanced FDI policy, and lack of comparable reliable data have hampered research in this area.

Applied methodology by drawing on international databases, rankings and scoreboards, enables systematic, cross-country comparison, which takes into account not only the policy towards incoming FDI (dominating in the literature), but also outflowing investments and captures the changes in approaches towards FDI witnessed after 2008+crisis, not just reports the current state.

Systematic approach to studying the possible crisis-induced changes in FDI policies in the EU suffers from the quality of proxies. Another limitations results from the tacit assumption that improvements or deteriorations of selected categories, which had happened in the examined period 2008-2015 can be attributed to the financial turbulences.

An alternative way of assessing the problem would be to tap into paid survey-based reports drafted by the leading consultancy firms. Research on FDI policy changes in the EU might also harness the content analysis method, which would allow exploring the media coverage of the FDI policy in the crisis context and reveal how much the rhetoric has changed in the aftermath of 2008. Another alternative might be approaching the largest EU-external investors and surveying them.

Research covering comprehensively all 28 EU MS comes at the expenses of deeper analysis taking into account several nuances playing undoubtedly an important role in FDI. In the future, a more nuanced scale of evaluating FDI policy's restrictiveness exceeding the simple dichotomy "pro / anti" or "friendly / hostile" should be employed. It may focus on selected countries as case studies and account for the mode of entry, country of origin or sector of FDI. For the moment, the proposed template may serve as the departing point for further exploration.

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The Effectual Approach in Born Global Firms: Current State of Research

Elena Pawęta

ABSTRACT

Objective: The aim of this paper is to systematise the existing research at the intersection of international entrepreneurship and effectuation theories and propose the future research directions in this area.

Research Design & Methods: The research was carried out with the help of the literature review, where the articles reviewed were mostly published within the last decade (2005-2015) and come from scientific journals specialising in entrepreneurship research.

Findings: The theoretical contribution of the study is the summary and critical analysis of the existing research on the application of effectuation logic in the international entrepreneurship field and propositions for further research.

Implications & Recommendations: The results of the study are exploratory and there is a need for future empirical research at the intersection of international entrepreneurship and effectuation research.

Contribution & Value Added: The research highlighted the division of the existing literature into two streams – papers which claim that international entrepreneurs use causation logic and the ones that argue on the application of effectuation theory. The paper suggests the areas of further research within those literature streams.

Article type: original literature review

Keywords: born globals; international entrepreneurship; internationalisation; effectuation; effectuation logic

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INTRODUCTION

Company internationalisation became a subject of interest for researchers at the end of the 20th century. Those studies focused on the attitudes and behaviour of firms in the process of going international (Li & Cavusgil, 1995). Despite dissimilarities in definitions, researchers mainly agreed that the internationalisation process has several consecutive stages. Stage internationalisation theories (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977) were mainly based on large multinational corporations which developed from large, mature domestic companies (Oviatt & McDougall, 1994). Later international entrepreneurship researchers (McDougall & Oviatt, 2000; Zahra & George, 2002) examined the possibilities to conduct business activities globally with limited resources. Since then, rapidly internationalising firms or “*born globals*” (Rennie, 1993; Knight & Cavusgil, 1996) became a very popular research subject. Such firms are defined as business organisations that, from inception, seek to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries (Oviatt & McDougall, 1994, p. 49).

There are many research papers trying to explain the key determinants of the international expansion of born globals. Most of the researchers show the combination of external factors, internal factors and factors related to the entrepreneur (Zahra & George, 2002). External factors are mainly associated with the market characteristics, as sectoral or regional export culture, international trade incentives or demand characteristics. Internal, organisational reasons of going international are niche products, global strategy and resource availability (Pawęta & Zbierowski, 2015). Entrepreneur-related reasons, however, are found to be fundamental in the internationalisation of a company.

The recent stream of research on effectuation logic applied in international entrepreneurship deepens the significance of entrepreneurial approach in born global companies. Several studies connecting international orientation of companies with the effectual way of thinking have appeared within the last decade (Bhowmick, 2008; Mainela & Puhakka, 2008; Schweizer, Vahlne, & Johansson, 2010; Sarasvathy, Kumar, York, & Bhagavatula, 2014; Galkina & Chetty, 2015). The theory of effectuation, entrepreneurial way of thinking and making decisions in situations of uncertainty, first introduced in 2001 by Saras Sarasvathy, includes considering available means, keeping in mind what is affordable to lose, then seeking strategic partnerships and exploiting contingencies to control the unpredictable future (Sarasvathy, 2001). According to Sarasvathy, effectual thinking is the prevalent logic among expert entrepreneurs in uncertain environments. Rapid internationalisation of born global companies is a highly uncertain environment for a novice entrepreneur. Therefore, effectual thinking is considered to be one of the key entrepreneur-related constructs determining the early internationalisation of firms (Pawęta, 2015).

This paper aims to systematise the existing research on the effectual approach in born global firms through the critical literature review and to present implications for further research within this area. The research is based on the systematic literature review (Pawęta, 2015) conducted on the sample of 94 articles from 41 scientific journals, which showed that the effectual approach is one of the main constructs determining the early internationalisation of born global companies. This paper discusses the literature stream which connects effectuation with international entrepreneurship and presents insights for

future research (Mainela & Puhakka, 2008; Schweizer, Vahlne & Johanson, 2010; Sarasvathy et al., 2014). The paper demonstrates that there is a potential for future investigation of the effectual approach in born global firms.

The first part of the paper describes the theoretical background of the effectuation concept in entrepreneurship studies, the next part presents the methodology used in the study. The third section elaborates on the findings of the literature review. The last part presents final remarks, research limitations and suggestions for further research.

LITERATURE REVIEW

The theory of effectuation, entrepreneurial way of thinking and making decisions in situations of uncertainty was introduced in 2001 by Sarasvathy. She introduced two distinct types of logic used in decision-making processes – causation and effectuation. Causation refers to typical managerial rational behaviour, where decisions are based on searching the ways to reach a distinct goal. Causation usually starts with a given goal, then focusing on expected returns and competitive analysis and finally assembling means to achieve the given goal. Effectuation includes a set of decision-making behaviours which are employed in the situations of uncertainty, when future is unpredictable, goals are not clearly known and there is no independent environment that serves as the ultimate selection mechanism. Effectual thinking includes considering available means, keeping in mind what is affordable to lose, then seeking for strategic partnerships and exploiting contingencies to control the unpredictable future (Sarasvathy, 2001). According to Sarasvathy, effectual thinking is the prevailing logic among expert entrepreneurs in uncertain environments. Rapid internationalisation of born global companies is a highly uncertain environment for a novice entrepreneur.

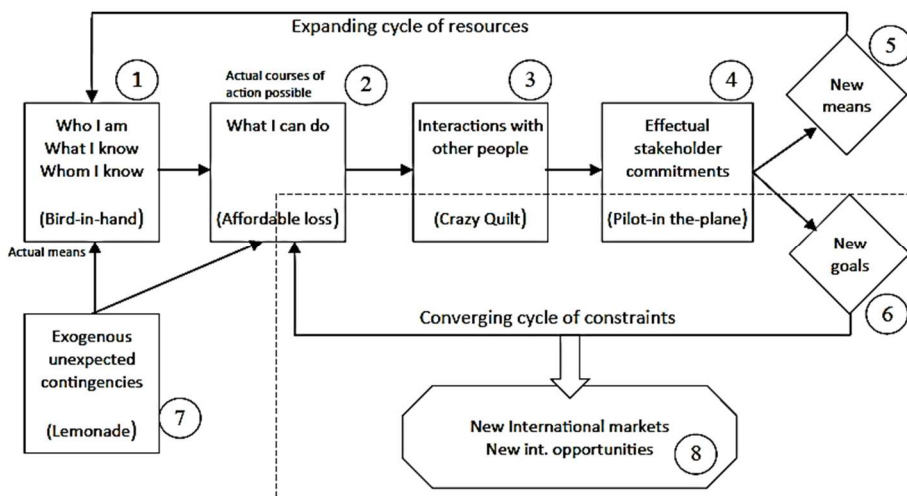


Figure 1. Effectuation theory

Source: Sarasvathy, 2008.

The main effectuation principles introduced by Sarasvathy (2008) are called bird-in-hand, affordable loss, crazy quilt, lemonade and pilot-in-the-plane (Figure 1).

Bird-in-hand

Before starting any activity, an entrepreneur analyses the means he or she has associated with identity (who I am), knowledge (what I know) and networks (whom I know). This analysis helps the entrepreneur to focus on what he can do rather than what he should or wants to do. Such a means-based approach helps to generate potential opportunities. According to Sarasvathy et al. (2014), by relying on means rather than on ends, effectuation encourages entrepreneurs to be open to new possibilities and to be finely attuned to their own capabilities.

Affordable loss

It is impossible to predict the future returns while acting in an uncertain environment. Therefore, expert entrepreneurs focus on what they can afford to lose, but not on what they can gain (Dew et al, 2009; Sarasvathy, 2008). This part of effectuation strategy reduces time engaged in strategic planning, as affordable loss can be calculated relatively quickly, and eliminates the need to predict the future returns.

Crazy quilt

According to the effectual approach, partnerships are the central method to expand resources (Sarasvathy et al., 2014). The effectual approach suggests that entrepreneurs do not search for specific stakeholders based on their strategic goals and preselected targets, but they engage in conversations with a variety of people they already know and by that they find stakeholders with whom they end up making commitments to a new venture. Effectual entrepreneurs tend to create possibilities for stakeholders who risk their assets because they see an opportunity in cocreating the venture with the entrepreneur (Kurzewska, 2012). Chandler, DeTienne, McKelvie and Mumford (2011) notes that entrepreneurs may build relationships, but only when both parties share the risk of the venture and benefit from the success of the venture, they constitute effectual partnership.

Lemonade

The effectual approach suggests that entrepreneurs “turn lemons to lemonade”, which means that they treat surprises as opportunities and by that may control uncertain situations to some extent. The “lemonade” principle allows to benefit from embracing unexpected situations rather than following a goal-oriented process that requires stability and no deviations from the plan (Chandler et al., 2011). There is empirical evidence that embracing surprises strategy has a positive impact on the R&D output in highly innovative research settings (Brettel, Mauer, Engelen, & Kuepper, 2012).

Pilot-in-the-plane

The pilot-in-the-plane principle emphasises the role of human beings rather than trends in determining the shape of future events (Sarasvathy, 2008). In the uncertain environment effectual entrepreneurs do not seek to learn more about it by extensive market research or estimating upcoming trends, but they intervene in the event space, transform and reshape it themselves or with the help of other effectual actors (Sarasvathy et al.,

2013). Effectual entrepreneurs do not see events running on autopilot, but consider themselves one of the co-pilots of the ongoing events.

METHODOLOGY

The author's previous systematic literature review on the main entrepreneur-related factors which influence rapid internationalisation (Pawęta, 2015) set the theoretical framework and defined methodological choices for further in-depth research on effectuation logic as one of the main constructs in early internationalisation studies. In this paper 6 main constructs were revealed within the systematic review of 94 articles from 41 scientific journals. Those constructs are: innovation and technology, entrepreneurial/managerial knowledge, entrepreneurial orientation, effectuation logic, international networks and dynamic capabilities of an entrepreneur. The systematic literature review presented above became a basis for the further research on effectual approach in born global firms.

In order to describe the current state of knowledge within the application of the effectuation theory in international entrepreneurship, the literature review was carried out. The articles reviewed were mostly published within the last decade (2005-2015) and come from the international scientific journals specialising in entrepreneurship research, such as "Entrepreneurship: Theory and Practice", "Journal of International Entrepreneurship", "Management International Review". The articles were chosen with the use of the methodology applied for the previous research (Pawęta, 2015) using a three-stage procedure:

1. Using bibliographic database Web of Science which allows to access the most significant international scientific journals in the fields of social sciences, art and humanities. The following keywords in different combinations were used: "effectuation", "effectual logic", "born global", "internationalisation", "entrepreneurial orientation".
2. Analysing references of the articles found, especially literature reviews and conceptual papers.
3. Screening the articles in order to check their relevance to the research and selecting the final sample.

The final sample includes scientific papers which can be divided into two main categories – conceptual papers or literature reviews and empirical research on the effectuation influence on rapid internationalisation of companies. The main observations which emerged within the literature review are presented and discussed in the following section.

RESULTS AND DISCUSSION

The review of the international entrepreneurship literature and its connection with effectuation logic was aimed at defining the current state of research at the intersection of those two fields of study. The literature reviewed starts with the first work of Sarasvathy (2001) on effectuation logic, includes further papers on effectuation in international entrepreneurship (Mainela & Puhakka, 2008; Schweizer, Vahlne & Johansson, 2010) and the latest insights on this topic (Sarasvathy et al., 2014; Galkina & Chetty, 2015). The key findings and methodological aspects of the papers reviewed are presented in Table 1, which shows the key findings and methodological choices of the authors researching the effectual approach in born global companies.

Table 1. The effectual approach in born global companies in the international literature

Author, Year	Sample	Research method	Main results
Bhowmick, 2008	4 case studies	Qualitative	The internationalisation process is a combination of enactment and effectuation. The enactment concept is quite similar to effectuation, it means that entrepreneurs, being a part of the situation they face, act without the entire knowledge of the situation, though both the situation and the decisions are often rationalised in retrospect.
Mainela & Puhakka, 2008	1 case study of IJV	Qualitative	International entrepreneurship is a complicated process which requires a set of means which are – effectuation logic, proactiveness and partnering strategies.
Chandra, Styles & Wilkinson, 2009	8 case studies of SMEs operating in knowledge-based industries	Qualitative	Companies with no prior international experience tend to use opportunities rather than apply systematic research. However, firms with international knowledge apply information from their networks and discover international opportunities using pre-existing means (resources, skills, technologies).
Schweizer et al., 2010	1 case study	Qualitative	The authors updated their conceptual model from 1977 and 2009 and included entrepreneurial aspects, like the effectuation principle. Their updated model includes the “exploiting contingencies” variable leading to progress in the internationalisation process. The authors agree that effectuation logic can strongly contribute to internationalisation of firms.
Anderson, 2011	2 case study	Qualitative	Effectuation introduces a pro-active entrepreneurial perspective that better describes the firm’s development than earlier theories used to analyse born globals’ internationalisation.
Harms & Schiele, 2012	65 rapidly growing SMEs	Quantitative	Entrepreneurs tend to apply effectuation rather than causation. The author stresses the importance of the individual level of analysis in international entrepreneurship research.
Sarasvathy et al., 2014	1 case study	Qualitative	The effectual approach can resolve conflicts and knowledge gaps in two reviews of IE. The authors offer four possibilities for future research at the intersection of IE and the effectuation research.
Galkina & Chetty, 2015	7 case studies	Qualitative	International entrepreneurs network with interested partners, instead of careful selection of international partners.

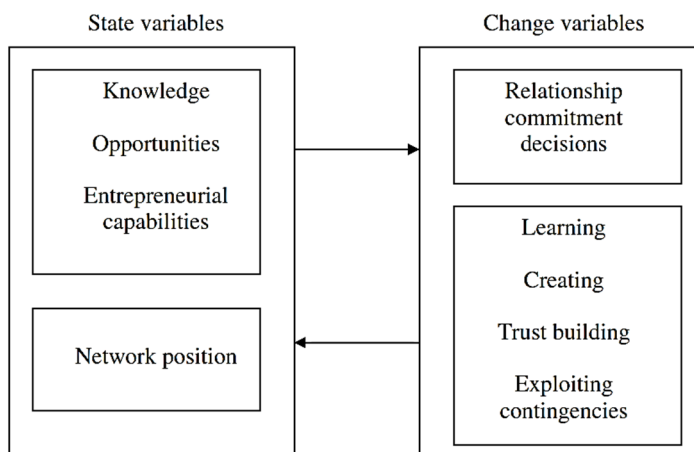
Source: Own study, based on (Pawęta, 2015).

Table 1 presents the articles which focus on the effectual orientation of the entrepreneur in born global firms. However, several researchers stress that born global entrepreneurs use a planned and analytical approach to business, which contradicts the effectual

approach (Brewer, 2007, cited in Harms & Schiele, 2012). For example, the research by Brouthers & Nakos (2005) showed that exporters use a systematic international market selection to outperform others, which illustrates the causation-based approach. That was followed by Gruber's (2007) argumentation that an expert entrepreneur may need both causation and effectuation ways of thinking when developing a new venture. This duality can be observed in the literature on international entrepreneurship. On the one hand, authors state that international entrepreneurs use the networking approach to build strategic international partnerships (Harris, Wheeler, 2005), that in the initial years the growth of the enterprise occurs without a formal or planned marketing effort (Frishammar & Andersson, 2009), which reflects the effectual logic of entrepreneurs. On the other hand, several papers state that there is evidence from the export literature showing a positive relationship between export planning and export performance (Brouthers & Nakos, 2005; Lucas, Whitewell & Hill, 2007). However, Harms and Schiele (2012) suggest that born global entrepreneurs do not have much time for strategic planning, conscientious research and analysis of global markets in the dynamic uncertain environment they operate in.

The studies presented in Table 1 suggest that effectual logic is prevailing among born global entrepreneurs. The first one to use the effectuation theory within the international entrepreneurship research was Bhowmick (2008). He describes the internationalisation process as a combination of enactment and effectuation. The enactment concept is quite similar to effectuation, it means that entrepreneurs, being a part of the situation they face, act without the entire knowledge of the situation, though both the situation and the decisions are often rationalised in retrospect (Bhowmick, 2008). Bhowmick proposes a model called the "enactment-effectuation dance", which illustrates that high levels of both enactment and effectuation can be a key to the international success. Mainela and Puhakka (2008) show that international entrepreneurship is a complicated process which requires a set of means which are – effectuation logic, proactiveness and partnering strategies. The connection between effectuation and entrepreneurial orientation was also suggested by Chandra et al. (2009) in the study which says that the aggressive way of exploiting contingencies during internationalisation is similar to effectuation logic proposed by Sarasvathy (2001).

In 2010 Schweizer, Vahlne and Johanson proposed an update for the famous U-model from 1977, where they suggested that networks are crucial for successful internationalisation. They stated that the business environment is a web of relationships, a network, and they suggested that the effectuation principle is consistent with their model. Therefore, the authors updated their conceptual model and included entrepreneurial aspects, among all the effectuation principle. They state that "such a view of rationality corresponds better with, often unintentional, internationalisation of a company as a result of managerial or entrepreneurial efforts – the view taken in this paper" (Schweizer, Vahlne, & Johanson, 2010). Their updated model, presented in Figure 2, includes the "exploiting contingencies" variable leading to progress in the internationalisation process. The authors agree that effectuation logic can strongly contribute to the internationalisation of firms.



**Figure 2. Internationalisation as an entrepreneurial process.
Updated model of the 1977 Uppsala internationalisation model**

Source: Schweizer et al., 2010.

An approach integrating effectuation into the international entrepreneurship theory was introduced by Sarasvathy et al. (2014). The authors state that their new model (Schweizer et al., 2010) “strongly and explicitly emphasizes the role of effectuation in the internationalization process” (Sarasvathy et al., 2014, p.79) and suggest ways to expand the international entrepreneurship research by combining it with effectuation research. The three characteristics of cross-border business presented by Sarasvathy et al. (2014, p. 76) justify the application of the effectuation theory in born global research: (1) cross-border uncertainty, (2) limited resources and (3) network dynamics.

The effectuation theory has gained attention among the international entrepreneurship researchers because internationalisation is an entrepreneurial process of decision-making under uncertainty (Harms & Schiele, 2012; Sarasvathy et al., 2014). Furthermore, the importance of the individual level of analysis in international entrepreneurship research is stressed. Andersson (2011) proposes to focus on decision making in the internationalisation context. Using a case study method, the author analyses born global entrepreneurial decisions using the effectuation theory. According to Andersson, effectuation introduces “a pro-active entrepreneurial perspective that better describes the firm’s development than earlier theories used to analyse born globals’ internationalisation” (2011, p. 637). The effectuation theory and earlier research on born globals use the resource-based view and the network approach, therefore, according to Andersson, effectuation should be included in future research on born globals. He also recommends further research on individual entrepreneur’s behaviour in the context of born global internationalisation.

The results of the research show that there is a need to focus on individual-level analysis of international entrepreneurship (Andersson, 2011). That justifies the application of the effectuation theory in born global firms research. High uncertainty on the global markets and limited initial resources push born global entrepreneurs towards the effectual way of making decisions.

CONCLUSIONS

The aim of this paper was to systematise the existing research on the effectual approach in born global firms. The research was based on the systematic literature review (Pawęta, 2015) conducted on the sample of 94 articles on the international entrepreneurship topic, which showed that the effectual approach is one of the main constructs determining the early internationalisation of born global companies.

This article presents work which connects effectuation with international entrepreneurship and suggests insights for future research. The research presented suggests that the effectuation theory can explain the entrepreneurial behaviour of born global entrepreneurs. It is stressed by Sarasvathy et al. (2014), whereas born global activity involves cross-border uncertainty, limited resources and network dynamics, which is coherent with the effectuation logic characteristics. There is evidence that causation logic is also applied by international entrepreneurs (Brouthers & Nakos, 2005; Lucas, Whitewell & Hill, 2007), however, there is an increasing trend in the research on internationalisation, which shows that effectual logic is prevailing among born global entrepreneurs.

There are certain research limitations which do not allow to conduct a broader analysis. Mainly, they are based on the limited amount of literature and research on this topic. As the effectuation analysis and its application in international entrepreneurship has been shaping during the last decade, there is still no defined conceptual framework and there is a lack of advanced empirical studies.

The paper shows that there is a potential for future investigation of the effectual approach in born global firms. The study summarises the existing research on the application of effectuation logic in the international entrepreneurship field. However, the results of the study are exploratory and there is a need for future empirical research at the intersection of international entrepreneurship and effectuation research. The results of the literature review are a starting point for further detailed analysis on effectual logic applied by born global entrepreneurs and its impact on internationalisation speed and scope.

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Utilisation of Business Advice in Small Innovative Firms: the Role of Trust and Tacit Knowledge

Katarzyna Łobacz, Paweł Głodek, Edward Stawasz, Piotr Niedzielski

ABSTRACT

Objective: The aim of this paper is to expand the understanding of the influence of trust relationship, as well as tacit knowledge on the process of business advice utilisation in small innovative firms.

Research Design & Methods: The analysis is based on empirical research conducted with the use of the explorative approach. The multiple case study methodology was used.

Findings: Trust relationships as well as tacit knowledge were identified as factors essential to the process of utilisation of business advice in small innovative firms. It was recognised that the significance of both factors is related not only to the process of advice, but also as a purpose of activities happening prior to advice. They are referred to as the initial phase.

Implications & Recommendations: The findings provide implications for further research of the structure of the process of business advice utilisation. It is related to the inclusion of the “initial phase”, as well as to the necessity to include both factors in further research. The paper also provides implications related to the measurement of business advice output, and recommendations on the construction of public policy instruments.

Contribution & Value Added: The originality of this work lies in using the process perspective and qualitative methodology in the field of the utilisation of business advice. It extends our understanding of the processes of business advice with regard to trust, as well as the use of tacit knowledge. The original contribution is to add the “initial phase” to the description of the business advice process.

Article type: research paper

Keywords: innovative firms; business advice; trust relationship; tacit knowledge; utilisation of business advice

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INTRODUCTION

As small firms have, by definition, limited internal resources, and as some of them have additionally limited managerial knowledge and business experience, they are likely to benefit from a wise use of external expertise (Hurmerinta-Peltomäki & Nummela, 2004; Hinton & Hamilton, 2013). Especially competitiveness of small innovative firms is regarded as dependent on the ability to access the resources of external knowledge effectively (Caloghirou, Kastelli & Tsakanikas, 2004; Kang & Kang, 2009). Recent research suggests that indeed the intensity of business advice is considerably high among small innovative firms (Stawasz, Głodek, Stos & Wojtas, 2004; Bennett, 2007; Johnson, Webber & Thomas, 2007).

It has been recognised that small innovative firms use a variety of external advisors, ranging from family and friends to government-provided services and private consultants (Ramsden & Bennett, 2005). However, in the literature and in practice, it is visible that firms – when they operate and develop – use also other sources of external expertise to enhance their final business offers, i.e. venture or seed capital shareholders, co-owners with a different background, employers or other entrepreneurs (North, Baldock, Mole, Wiseman & Binnie, 2011; Soriano & Castrogiovanni, 2012). Despite the fact that a considerable amount of studies is available on the issue of business advice, ranging from the impact of advisory services to the firm's satisfaction analysis (Bennett & Robson, 2003; OECD, 2004; Chrisman, McMullan & Hall, 2005; Johnson et al., 2007; Yusuf, 2010), the development of innovative business offers and the development of small innovative firms that follows, in conjunction with differently sourced business advice, remains poorly recognised. This has an impact on difficulties in measuring business advice for small innovative firms, starting from problems with the definition of business advice itself, its role and placement within the process of development, followed by difficulties in defining possible results of business advice, and comparing those results against different criteria.

Therefore, there is a need to understand deeply the business advice logic in the context of small innovative firms. For this purpose, the authors conducted a series of Europe-wide case studies on which they base their description of the advice process taking place within small innovative firms. They were studied based on a common diagnostic questionnaire which served as the basis for a semi-structured interview. The analysis conducted led to the observation that the presence of trust relationship as well as the tacit knowledge exchange and creation are present at subsequent stages of the advisory process. It is related particularly to the processes of the complex, intensive advisory relationship referred to as the utilisation of business advice (Głodek & Łobacz, 2015).

The aim of this paper is therefore to expand the understanding of the influence of trust relationship as well as tacit knowledge on the process of business advice utilisation in small innovative firms. The paper presents the theoretical background emphasising the interaction between the advisor and the entrepreneur, with special attention paid to establishing and maintaining the trust relationship between the entrepreneur and advisors, as well as to the kind of tacit knowledge. The analysis includes a dynamic perspective related to the differentiation of the initial phase, which precedes the advice process, and the process itself.

SMALL INNOVATIVE FIRMS IN THE PROCESS OF BUSINESS ADVICE

Small Innovative Firms' Behaviour and the Need for External Knowledge Advice

Small innovative firms are considered as especially important in today's economy (IDC, 2007; Gagliardi et al., 2013). Those are defined as firms which proactively seek new solutions in order to provide better market offers to their (potential) customers and therefore propose enhanced value in comparison to what is already available. Thus, they are looking for rents higher than typically established for the product line. Based on this condition, small innovative firms are regarded as growing enterprises managed by owners-entrepreneurs. As such, assuming possible venture financing typical for small innovative firms with a high growth potential, those are firms where the owner-entrepreneur holds the majority of shares. However, since this condition limits directly the size of the firm, the most important here is the entrepreneur's role in strategic decisions making, as well as the possible impact of third parties on those decisions (Łobacz & Głodek, 2015).

Due to their specific features, small innovative firms, as small firms in general, are considered as behaving strategically differently than bigger entities. They are described as 'emotional economic units', motivated more by 'doing' rather than by 'managing' (Dexter & Behan, 1999). Additionally, they create a very personal and idiosyncratic culture with a strong focus on informal communication (Storey, 1994; Cagliano et al., 2010; Mazzarol, 2011). Thus, they are described as making their decisions in the informal way, to a large extent grounded in trust and based on a holistic approach (Gibb, 2000). It is also said that small firms in general represent the 'culture' in which the decisions and, as a consequence, actions of the owner-entrepreneur are shaped by a motivation to be independent, an intuition and a desire for personal compatibility among the members of the entrepreneurial team (Dalley & Hamilton, 2000).

In terms of knowledge acquisition, it is highlighted that owners-entrepreneurs look for external knowledge which can be directly employed in their processes, thus, they avoid theoretical knowledge (Dalley & Hamilton, 2000). They also prefer to 'learn by doing' and stress that learning by experience is the most valuable way of knowledge acquisition (Dalley & Hamilton, 2000). External knowledge acquisition seems to be important whenever maintaining competitiveness of small innovative firms is considered. Some firms experience a critical knowledge gap resulting from relatively high complexity of technology and market exploration problems faced by innovation-focused entrepreneurs, or the erosion of innovation rent while implementing new market offers, which can be limited when more knowledge is used in the process (Bennett & Robson, 2003; OECD, 2004; Chrisman et al., 2005; Johnson et al., 2007; Mazzarol & Reboud, 2009; Yusuf, 2010). In both cases, it is crucial to maintain their competitiveness and profitability.

The development of small innovative firms also generates a need for the acquisition of external knowledge necessary to launch new products and to manage the process of expansion. It often requires exploration of new options and solutions that enable firms to deal with future and/or existing problems (Wren & Storey, 2002). This allows the firm to enter the next stage of its development in terms of the organisation of daily operations, configuration of resources and market interactions (Churchill & Lewis, 1983; Garnsey, 1996; Matlay, 1999; Łobacz, 2012). Thus, the use of external expertise is especially needed when new market offers are implemented. As innovative entrepreneurs are highly focused

on the introduction of new offers (Łobacz, 2012), their need for business advice is supposed to be of frequent nature (Łobacz & Głodek, 2015).

Delivery of Business Advice for Small Innovative Firms

Business advisors are perceived as market players who are able to provide knowledge resources for firms with limited access to those resources. As business advice has many different forms, ranging from the provision of general knowledge, through specialised trainings to coaching and mentoring, business advisors are variously defined in consecutive studies and in practice (Bennett & Robson, 2003; Johnson et al., 2007; Mole, Baldock & North, 2013). Therefore, from the point of view of support they offer to small innovative firms, they are broadly defined as individuals, whether self-employed or employed within a private or public organisation, who use their knowledge to add value to the firm's business activity through the provision of short or long term support at the operational or strategic level (Łobacz & Głodek, 2015).

In this context, advice may be considered as a resource available for the small firm (Bennett & Robson, 2003; Chrisman et al., 2005; Robson & Bennett, 2010). However, some small firms are not interested in reaching for it. North et al. (2011) indicate that 60% of British SMEs did not make any use of external formal assistance during the three years prior to being surveyed.

The subsequent authors stress, however, a huge differentiation of business advice provided specifically for small innovative firms. This includes not only the type of advice needed or the type of advisor chosen within the process (Bennett & Robson, 1999), but also the level of management which the advice influences (North et al., 2011), as well as the type of formal behaviour in relations with the advisor (Strike, 2012). In their broad study, Bennett & Robson (1999) indicate six types of business advice layers: professional specialists, professional generalists, market contacts, social contacts, business associates and government agencies. The list comprises professional private or public organisations as well as informal parties.

Although most studies focus on formal sources of advice, it was observed that owners-entrepreneurs tend to use informal ones more frequently (North et al., 2011; Soriano & Castrogiovanni, 2012). Those include friends and family or other inner-circle advisors, but also agents who are in a business relation with the firm, e.g. accountants, suppliers, bank employees, customers, and trade partners (Blackburn & Jarvis, 2010). Informal business advice is especially used by newly-established firms (up to three years from their foundation) and those in the course of the transformational process (North et al., 2011). Informal advice has been also observed to be especially important for family firms, which operate based on closer family and business relations (Strike, 2012).

While it is argued that firms which use informal advice subsequently tend to search for formal sources of knowledge (North et al., 2011), it is also suggested that the distinction between informal advice and formal assistance is not always clear cut, and formality is a function of the situation and the structure of the advice that is sought (Robson, 2008). This blurred border suggests that the categorisation of advisors based on their background may not constitute an important issue for small firms. Since the crucial issue for them is to find external knowledge ready to be directly employed in their internal processes, the differentiation based on the content of advice may be perceived as more influential.

North et al. (2011) used the content factor to differentiate between transactional assistance and transformational assistance. Transactional assistance relates to situations when support is provided at arm's length via a particular piece of information in order to assist with standard, day to day business operations. Transformational support, in turn, is observed when in-depth, diagnostic support is required in order to facilitate stepped change relating to business growth and productivity. Furthermore, Christensen & Klyver (2006) distinguish between the advisor's role on the basis of different business relations considered. They contrast the situation in which the consultant is assumed to 'know what' and also to 'know how' knowledge should be transferred to the firm with the case when the advisor acts as a change agent, acquiring knowledge about the firm and the context in which it operates, thus participating in the creation of unique new knowledge, which can be further used as a unique strategic resource specifically by this particular firm.

Business advice for small firms includes virtually all areas of business. However, it has to be pointed out that a substantial part of advisory activity refers to the provision of services focused on dedicated, narrow topics. It is determined by the entrepreneur and refers to isolated areas of company activity. The survey done by North et al. (2011) indicated that 83% of guidance in the UK SMEs is related to specified areas. Typical advice refers to the field of accounting and legal advice related to compliance issues. Sales and marketing, survival, finance, IT systems and websites were also indicated as the areas of SMEs' interest (North et al., 2011). Other business advice areas encompass, among others: conditions relating to market information (including international markets), technical solutions relating to new products, recruiting staff or management of cash flow. This may suggest that the use of business advice is related to the problems encountered by the company in its daily operations, or challenges of development processes.

In the research done by North et al. (2011) the minority of small businesses (17%) which were involved in business advice activity in the last three years benefited from advice related to more complex issues. Thus, taking into account that some form of advice is used by less than half of small businesses, it should be noted that comprehensive consulting is extremely rare. Chrisman et al. (2005) indicate that this type of advice can provide particularly high value to innovative firms at the start-up phase.

Trust

There is no single comprehensive definition of trust, and significant diversity exists even within disciplines (Walter & Smallbone, 2006). However, in terms of business behaviour, the trust concept is related to the perception of the probability that other agents will behave in a way that is expected (Gambetta, 1988). Williamson (1993) points out that, both in personal and commercial relations, trust is often based on a calculated risk. The person trusting is convinced that trusting is a rational behaviour because the risk associated with the bestowed trust that is not fulfilled is justified by the potential gains if the trust is maintained. One of the factors related to trust can be the risk of undertaking undesirable actions based on the acquired knowledge about the company. Some entrepreneurs may show distrust related to the quality of advice (Scott & Irwin, 2009, North et al., 2011), which carries the risk of no effect and the loss of resources involved (at this time).

Additionally, there are various concerns related to the inherent personal interaction between the owner-manager and the external advisor as well as the task interaction (Ramsden & Bennett, 2005; Dyer and Ross, 2007) suggest the existence of possible power

imbalances and disparate 'world views' between advisors and business owners. Some owner-managers simply may feel unsure of their ability to deal with 'smart and sophisticated consultants' as equal process partners. Some researchers claim that because small firm's owners tend to value their independence greatly, the acceptance of advice may be recognised as a symbol of dependence or even of failure (Curran, Jarvis, Blackburn & Black, 1993). To search for assistance, the owner-entrepreneur must see the need for advice, i.e. must be convinced of his or her own knowledge gaps and admit their existence (Chrisman et al., 2005).

Tacit Knowledge

Chrisman et al. (2005) indicate that the transfer of tacit knowledge is particularly recommended in the context of new companies. Tacit knowledge may increase the quality and value of the knowledge gained from advisors. Since the tacit elements of that knowledge are unique to the individual and the venture, those elements are likely to be rare, difficult to imitate, and only substitutable with other knowledge of similar quality (Barney, 1991; Labas, Courvisanos & Henson, 2015). Since tacit knowledge is not transferable separately from its context, it creates important constraints related to its transferability to other parties (Chaston 2010; Thorpe, Holt, Macpherson & Pittaway, 2005). With regard to business advice, we can assume that the transfer must be linked directly to the purpose of advice itself. Therefore, tacit knowledge related to a start-up company should be transferred with relation to the particular company, not as general information.

The limited ability to codify tacit knowledge makes its transfer an even more complex issue. The possible way to transfer tacit knowledge is to use a direct interaction of two or more entities. This is usually a time-consuming process and requires high involvement of both parties.

Business Advisors' Roles in the Development Process of Small Innovative Firms

The conducted analysis reveals that the delivery of business advice for small innovative firms has many different forms and dimensions and its impact is dependent on many different factors, which are approached and described separately in consecutive studies. Despite the fact that many authors touch directly on the problems faced by innovative entrepreneurs, it is necessary to include the attitude to externally sourced knowledge of proactive and self-confident firm owners as well as difficulties in specification of problems to work on for which the external advice is needed. The currently available models propose limited understanding of the nature of business advice for small innovative firms. As a consequence, the picture of business advice for small innovative firms remains blurred and its impact on firms' competitiveness is difficult to measure. Thus the process analysis reveals a different perspective on business advice, which seems to be providing a valuable insight into the phenomenon.

The understanding of current research on business advice leads to the separation of two distinctive roles of business advisors providing their services for small innovative firms: (1) the role of expert, and (2) the role of process participant. The typically defined role of expert is to be perceived as a source of external knowledge resources which should be temporarily supplemented, as they are not needed on a regular basis in day-to-day operations, but are necessary to proceed with particular actions and at the same time incorporation of those resources into the firm's structures would be cost-ineffective. In

contrast, the role of process participant is related to the transfer and creation of knowledge which is required to move forward (survive or develop) in particular circumstances; this type of knowledge is thus more intangible and in order to apply it in the firm's processes, it must be combined with knowledge embedded within the firm.

When looking at those two roles from the process perspective, two distinctive behaviours with respect to business advice are to be defined, which are called respectively (1) the use and (2) the utilisation of business advice (Głodek & Łobacz, 2015). The first one, the use of business advice, refers to the activity of an individual or a team of individuals who know frontier knowledge and best practices, and who transfer this knowledge to firms in a professional way (Christensen & Klyver, 2006). In this case, the specific portion of knowledge is delivered to the firm and the advisor is assumed to have the capability to decide what type of knowledge is in those specific circumstances required, and also how it should be implemented. The firm receives the knowledge and it may decide whether to make use of it and to what extent it will be actively engaged in its implementation. The relation may be thus described as a one-way knowledge flow. In this scenario, the outcomes of the advisory process are to some extent predictable and depend highly on the quality of knowledge which is transferred, on the one hand, and the level of involvement in the implementation of advised solution, on the other hand.

In contrast, the utilisation of business advice presumes a long term relation within the process, which involves a multidimensional combination of knowledge sourced from the background and experiences of the advisor or a team of advisors and the firm's owners. The advisor, from this perspective, is seen as a participant of the new solution development process. She/he is thus a participant of the creation process, who listens, observes, and identifies problems, but also their context (entrepreneurial, organisational, market, etc.), and then she/he actively takes part in the recurrent process of new ideas generation, selection and adjusting them to the context of a particular firm. An outcome of the process is new knowledge combined from internal (mostly the owner-manager) and external sources (the business advisor). Outcomes of this process are often unpredictable in terms of scope and time horizon, but often also spectacular and with a strategic meaning.

RESEARCH METHODOLOGY

The aim of this paper is to expand the understanding of the influence of trust relationship as well as tacit knowledge on the process of business advice utilisation in small innovative firms. In order to achieve the set objective, two research hypotheses were formulated:

H1: The creation of the trust relationship between the owner/manager and the business advisor before the onset of the advisory process determines the occurrence of business advice utilisation.

H2: Business advice utilisation results in the creation of new tacit knowledge.

The nature of the objective and the hypotheses formulated had an impact on the applied research methodology. The analysis is based on empirical research conducted with the use of the explorative approach. The multiple case study methodology was used (Yin, 1989), as this method has been recognised as a valuable approach to the study of small businesses (Chetty, 1996) because it offers a useful framework for analysing the real context,

in particular, when the phenomenon is influenced by a number of factors determining each activity (Yin, 1989) and its nature is not very clear.

The process of empirical data collection took place using the individual in-depth interview technique. The instructions for the in-depth interview shaped the measurement tool. The formula of narrative interview was adopted, hence communication techniques were used in order to focus the discussions on the issues related to the subject of the research, at the same time assuming the greatest possible freedom of expression of the interlocutor. This enabled the creation of optimal, natural and reproducible conditions to conduct a conversation, which is particularly important in terms of ensuring the accuracy and reliability of measurement.

The in-depth interviews were conducted personally by members of the research team with owners of small innovative firms. They were asked about the development context of the firm from the beginning of its foundation, and all aspects related to broadly defined advisors within the process. The interviews were recorded on digital media, which enabled their repeat use at the stage of data analysis. On the basis of each interview, a case study protocol was also prepared. The study was conducted in the years 2014-2015 on a group of forty small innovative companies located in three different regions of Europe. The provision of business advice to the firm, within the last three years before the interview, was one of the key case selection criteria. All the case studies were focused around the understanding of the participation of different types of business advisors in the process of small innovative firms' development. It was especially concentrated on the interaction between the entrepreneur and the advisor while operating on a daily basis and implementing changes and the outcome of the process. Within the analysis, the rationale for searching for external advice, as well as the advisor's motivation to participate in the process were specially considered. In the framework of the study, four cases of advice utilisation which are described and analysed in the paper were identified.

CASE STUDIES ANALYSIS

Case Study 1

The case concerns a small firm offering cloud-based management tools targeted at small and medium-sized enterprises. The firm was founded by three entrepreneurs with the support of public-private seed capital fund. The entrepreneurs have a technical background and approximately ten years' work experience in large companies, in the IT development and team management positions. The firm was established based on the implementation to the market of the innovative product in the form of software supporting administration of large companies. Although the product was technically well prepared for the market launch, the firm encountered a significant problem with the conversion of free beta users to clients willing to pay for the final product.

The idea of strategic change and conversion of primary logic was a result of advice which originated from the board of supervisors. The formation of the board of supervisors was one of the requirements stated in the investment agreement with the seed fund. The original composition of the board was the result of negotiations with the investor. Due to the nature of activities of public-private fund, some members of the board were employees of the investor - the regional development agency. The level of business knowledge of

its members was, however, not very highly rated by the entrepreneurs. For reasons independent from the firm and investment fund representatives, the regional development agency after a few months decided to withdraw its representatives from the board.

As a result, the entrepreneurs could propose to replace them with persons that they chose (“We looked for them intensively and established a range of different contacts. In Poland there are very few cloud start-ups which have succeeded”). Those who were eventually accepted to the board had been selected according to the criteria of business experience, and industry-specific experience had been especially valued (“At the moment, we have constructed the board of supervisors with the presence of great mentors who are experienced in cloud-based applications. (...) gradually we exchanged them [the members of the board of directors] for people who have experience in sales, in the development of start-ups and the board have become very, very valuable”).

After the change of the board of supervisors (approx. 12 months after the foundation of the firm), the intense interaction between its members and the entrepreneurs started. The right questions began to be asked. Those questions initiated the debate on the nature of the business problems of the firm (the board of supervisors helped not to get distracted by issues that were not critical to the firm’s core business).

In the beginning, the entrepreneurs were advised to focus more strictly on ‘problems of tomorrow’, and at the same time some urgent issues requiring intervention were neglected. Those were related, in particular, to marketing problems, especially advertisement and distribution channels (“At that time (...) we had a lot of ideas, for example: let’s find a company in the neighbouring countries which will help us distribute our product, or we may find people to affiliate marketing (...) and maybe let’s go to a few conferences”. But “...we received [from the board of directors] a strong message that we needed first to learn to sell our product directly from the website. If it proves that the product is saleable, then it will be worth trying to start sequentially building the network of sales channels. Before doing this, it must be checked whether the product has to be tailored to the specific audience”). When the entrepreneurs adopted this approach, they realised that the firm could not follow the current strategy and stick to selling the product they had developed.

At meetings with the board of supervisors, actions that should be taken were gradually identified. First of all, the board members motivated the entrepreneurs to contact their customers directly, not through the virtual media but in person. This allowed them to learn how current customers use their product, and revealed that to a large extent the product was used for different purposes than it was designed because the customers valued mostly one additional feature of the product instead of its core function. The lessons learnt were analysed during the board of supervisors’ meetings, and additionally the members of the board decided to test the product themselves (“...it also made it clear to us that we [the product] are not for everyone”). As the members of the board familiarised themselves with the product, they participated in the process of new product design, by giving suggestions for desired functionalities, but also by stressing the importance of end users’ perspective (“... He [one of the board members] told us: if we make a product for marketing personnel, we cannot listen to engineers and IT people. They are able to generate thousands of ideas of new features that are not really needed. He said: Listen to everybody, not just programmers, if you do not make a product for managing software development”). That was a lesson crucially important to us and the future of the firm.

The summary of factors related to the trust relationship and tacit knowledge creation in Case Study 1 is presented in Table 1.

Table 1. Summary of advice process: Case Study 1

Trust relationship	Case 1
Initial phase (prior to the phase of advice)	Contacts were initiated during networking meetings. The entrepreneurs looked for people with sectoral expertise. It was not a process of looking for new employees, but rather a process of acquiring new sector-specific knowledge. The trust relationship was initiated during a range of meetings with each expert. It was a base for making the choice regarding experts. The length of the phase – 6-12 months.
Advisory phase	Consolidation of trust was achieved through (i) demonstrating professional competences – esp. indicating the problems crucially important for the business and thus preventing the entrepreneurs from spending too much time on secondary issues; (ii) demonstrating commitment to the business through, e.g. personal involvement in the process of product testing. The advisor's remuneration was not fixed in the process, it was based on the final success of the project. The remuneration model changed during the process of advice, with the investment decision of the advisory firm.
Tacit knowledge involvement – advisors' side	Case 1
Knowledge based on previously existing experience	Extended sector-specific knowledge, as well as business development knowledge. It was described by the entrepreneurs as asking typical questions related to the business and product development (including service design), but at the right moment of the advisory stage.
Newly developed knowledge	New tacit knowledge is developed through personal involvement of the advisors in the process of product redesign, followed by strategic change. They were involved in the product testing process, followed by a joint analysis of customer feedback during the meetings of the supervisory body.

Source: own study.

Case Study 2

Case no. 2 concerns the advice provided for an entrepreneur who owns a group of four IT microenterprises. All the companies were engaged in various IT operations, ranging from implementing complex IT systems provided by a large market player to developing individual IT systems customised to particular requirements. The entrepreneur separated businesses into different companies because this approach was necessary to build different corporate images in different markets. The owner can be described as a serial entrepreneur who started with the first of the current businesses seven years before the analysis. The entrepreneur had earlier experience in business – he had founded and run two service providing firms which had been liquidated (“I simply failed to manage those businesses.”). The crisis which prompted the need for advice was closely linked to the person of the entrepreneur.

Prior to obtaining the advice, the entrepreneur, who had founded all the firms, was heavily involved in management activities. He described the strategy as keeping personnel

costs as low as possible (“In the course of the year I hired the first employees - cheap and inexperienced”). However, as the scale of business grew along with the companies' development, some management obstacles as well as profitability issues appeared (“I realised that most of my working time I fought with my employees, and at the end of the day I had no reward”). Seven years after the foundation of the first firm, the entrepreneur decided to temporarily give up operational management. For approx. 8 months he was looking for a solution for himself. He took an MBA course, participated in various educational and networking events on management philosophy and management strategies. Those experiences caused changes in his perception of the management aspect (“I realised that only if you can measure something, you can manage it”).

One of the main benefits from participating in the MBA course was meeting new people, including those with considerable experience in business and in business advice. They changed his view on doing business. (“When I started doing business, I thought that there were very expensive guys (advisors) providing some advice, but when I met them personally and listened to them, I realised that their work could be very useful”). The entrepreneur built a trust-based relationship with the people he met, and they started acting as his informal advisors, providing their services during the discussions at the MBA course. After that period of very effective discussions, the entrepreneur took a decision to start the formal process of advice. The process began with the determination of general business objectives to be achieved. It allowed an initial indication of the scope of work. The entrepreneur pointed out his vision for the firm, especially as it concerned his role as the job supervisor, not the person solving operational problems. The key issue was also the management strategy, and especially the enforcement of capacity efficiency without direct supervision of the business owner.

The advisory process lasted six months. It was provided by a team of 3 to 4 people. In terms of the business content, it began with audits of all the companies in the group. The advisors focused particularly on human resource management, building objectives and their measurement, as well as marketing and finance issues. They worked full time in other firms (at different management levels of large and medium-sized companies) located in other cities, hence they worked as the firm's advisors mostly at weekends. The results of the analyses conducted by the advisors were broadly discussed and used as vehicles to look for a solution. The entrepreneur participated in most of the meetings, acting as a principal, but also as a team member with the most extended knowledge about his firms, their operations and markets. The advisors were employed on a part-time employment contract, which regulated payment for advice services, but did much more work based on the personal relationship. As a result, the advisors helped to develop the management system of individual teams, in particular the principles of defining targets, monitoring and controlling with the support of financial indicators. The implementation of the new management system resulted in an increase of turnover (twice) and of profitability (five times) in all the four firms. The entrepreneur also founded another company exploring a new market.

The summary of factors related to the trust relationship and tacit knowledge creation in Case Study 2 is presented in Table 2.

Table 2. Summary of advice process: Case Study 2

Trust relationship	Case 2
Initial phase (prior to the phase of advice)	Contacts were initiated during the MBA course attended by the entrepreneur and his future advisors. They had several informal discussions about doing business and, specifically, small company management issues. All this happened during long meetings – approx. 4/5 hours each. The length of the phase – approx. 6 months.
Advisory phase	The trust related to confidence in professional skills of the advisors was built during the initial phase. Building on that, the entrepreneur agreed that the design of the advisory process was subordinated to the advisors' time constraints (all the advisors worked full time in corporations). The adjustments were related to the timing (weekends), the process length (6 months), as well as the manner in which advice was provided (time consuming - frequent meetings and discussions with the presence of the entrepreneur). The advisors' remuneration was not fixed in a detailed way, it was based on the final success of the project. The remuneration model changed during the process of advice, along with the investment decision of the advisory firm.
Tacit knowledge involvement – advisors' side	Case 2
Knowledge based on previously existing experience	Company (large and medium-sized companies) based experience, mainly in human resource management, marketing, and finance management.
Newly developed knowledge	New tacit knowledge was developed during the six months of interacting between the entrepreneur and the team of 3 persons (for limited time 4 persons), with intensity of once every one/two weeks. As described during the interview – the meetings were crucial to building the common understanding as well as to developing the direction for advisory work.

Source: own study.

Case Study 3

Case no. 3 concerns the development of an initial concept and the start-up phase of a small firm providing telemedicine services. The first version of the project itself was created approx. 5 years before establishing the firm. The idea came from a group of 20 doctoral students and master students. They began to look for an investor, however, at that time the project was assessed as imperfect in terms of business feasibility. As a result, the project was abandoned for four years. Finally, the challenge was retaken by an entrepreneur who is also a scientist specialising in biotechnology. To start with the services, it was necessary to develop new solutions in the fields of electronics, IT and data transmission management. In the very beginning, the entrepreneur faced problems which could not be solved without external support. Those were related to the launching into the market of the first product and the construction of the business model for the newly established firm.

The advice was provided at the seed stage of the firm's development. The team of advisors consisted of experts working for a small consulting company which supported the project team at the seed stage of the project. Their aim was to prepare the project for

venture capital investments. The initial role of the consulting company was to provide advice, however, gradually, step by step, the advisors increased their engagement in the project. Finally, when the public-private vc fund at the last stage of pre-investment process decided not to invest in the project (the reason was not related to the project, but was connected with serious internal financial problems of the fund), the consulting company decided to invest the first round of capital investment.

Table 3. Summary of advice process: Case Study 3

Trust relationship	Case 3
Initial phase (prior to the phase of advice)	Contacts were initiated when the entrepreneur was looking for external support in the preparation of the business plan for a possible venture capital investor. The trust relationship was initiated by: (1) providing strategically important knowledge at the very first meeting, (2) demonstrating a high commercial potential of the project, as well as high motivation of the entrepreneur.
Advisory phase	Consolidation of trust was through demonstrating professional competencies of both sides, openness in discussing current problems and demonstrating the determination to work to achieve common goals. The trust relations were established between the entrepreneur and the head of the advisory group - based on this, some new advisors were introduced for short-term activities.
Tacit knowledge involvement – advisors' side	Case 3
Knowledge based on previously existing experience	Knowledge in the field of marketing, business models, and legal issues.
Newly developed knowledge	New tacit knowledge was developed during a series of meetings. The process of consultancy consisted of weekly face to face meetings. New knowledge was related, among others, to the service design adjusted to a very specific market segment. A number of changes in the business model of the developing company were one of the consequences of the new knowledge

Source: own study.

When the process of advice provision started, a direct person was delegated from the consulting company to work with the entrepreneur on the development of the project. They met regularly on a weekly basis. The support was focused around the customer profile, as well as the marketing and business model. The additional area of support was related to legal issues concerning the project. The entrepreneur stressed the importance of acquiring specific business knowledge. ("We learnt a lot and it was a really terribly active year in this respect", "We are more science-oriented", "They pay attention to digits, even those after the decimal, which for us were not significant...", "...we pay attention to other things, and thus complement each other in this work"). The entrepreneur highlights that the technical side of the project is completely based on the knowledge developed by the firm and its subcontractors, but the marketing strategies and (partly) the business model are an outcome of many consultations and mutually developed ideas. The relation is based on the assumption that decisions are taken by the entrepreneur, but they are based on solutions developed through mutual discussions. The advisor-investor's reward for work was covered by the shares in the venture ("Their role is to support (us), we have a common

goal, we are in the same team and it would not make any sense if the investor received funds from us"). For this firm, the advisor is a source of business knowledge that the initial founders did not have. The success of the firm is a result of strict cooperation between those who have technological knowledge with parties who add business expertise to the process of product development and marketing. Without this cooperation, this firm's success would be questionable.

The summary of factors related to the trust relationship and tacit knowledge creation in Case Study 3 is presented in Table 3.

Case Study 4

The case study concerns consultancy delivered to a company providing para-medical as well as analytical services in the veterinary field. The cooperation between the entrepreneur (research based experience, with limited business practice) and the advisors originated when the entrepreneur was looking for assistance in the preparation of the application for a public investment grant. At that time he was willing to receive public funding for the implementation of his invention (in the veterinary field) in a future start-up company. During the meetings with the advisors, he discovered that his case was not appropriate for the grant. However, because of a high business potential of the technologies which the entrepreneur possessed in the form of know-how, the advisors indicated a possibility to use venture capital investment during the start-up phase.

The main advisory process was related to building a complete business model for the new company with all strategic and formal elements. It was provided before formalising the firm's foundation by a group of persons cooperating with a public-private seed capital investor. The persons providing advice were partners in a consulting company focused on supporting the development of new innovative ventures. The process of advice in its basic phase lasted approx. 6 months. It included support for the process of building the strategic concept of the project.

In discussing the design of the venture project, the entrepreneur was encouraged and supported to gain a broader perspective on the project and the company. The advisory process was conducted by a team consisting of persons representing the consulting company (2-3 persons at the session) and the representative of the seed fund. The sessions during which the owner-entrepreneur, along with a team of advisors, discussed the development potential of the new firm, as well as the mutual relation of services and capabilities to achieve synergy, constituted an important component of the process. The result of the advisory process was a significant redesign of the scope of the planned portfolio of services provided by the company. They were designed in such a way as to start a business with a focus on non-innovative services, widespread within the target group, and then develop gradually to be ready to implement services which were to be highly innovative and thus highly profitable.

The meetings of the owner-entrepreneur with the advisors were long and complex. In this framework, business concepts were developed and therefore it was difficult to determine the authorship of individual ideas. ("It's hard to determine who the author of a particular idea is. We were sitting in this room, a few people. He asked: what else is on the market, what could be done? Someone thought: the German market is service-oriented (...) and the question [was addressed to the originator]: Can you do it? [answer:] Of course,

no problem”). A high level of interaction between the owner-entrepreneur and the advisors was underlined. Ideas were put forward by both sides, commented on, and then became the basis for the next ideas. It can be argued that to some extent the entrepreneur agreed to a certain restriction of independence. Nevertheless, in the course of the entire advisory process and after the founding of the company, he kept a dominant power. The end result was a thorough reconstruction of the new company’s business model (“The result of our work was a complete change in the design, from an initial concept of a kind of ‘local veterinary super-clinic’ to the idea of “a laboratory with a national scope”). The advice was provided without any upfront payment. The remuneration of the advisors was in the form of a minority stake in the company. According to the respondent, the entrepreneur was unable to pay for such extensive advice with his own money.

Table 4. Summary of advice process: Case Study 4

Trust relationship	Case 4
Initial phase (prior to the phase of advice)	The trust relationship was initiated during 3-4 meetings, initiated by the entrepreneur who at that time was looking for assistance in the preparation of formal part of an application form for a public investment grant.
Advisory phase	Consolidation of trust was through demonstrating openness during an intensive knowledge exchange process as well as demonstrating professional competencies of the advisors. Both sides of the process showed flexibility in terms of adjustment of the initial assumptions and ideas. Trust was essential to the business concept development process, which was built upon a number of joint meetings (including brainstorming sessions) with an open information exchange.
Tacit knowledge involvement – advisors' side	Case 4
Knowledge based on previously existing experience	Knowledge in the field of marketing, business models, and legal issues. Experience related to the development of new venture strategies.
Newly developed knowledge	The complete business model as well as the product-market portfolio were developed thorough the process of group work. The result of the process was fundamentally different from the initial idea of the entrepreneur.

Source: own study.

The summary of factors related to the trust relationship and tacit knowledge creation in Case Study 4 is presented in Table 4.

FINDINGS

The cases of the provision of intense and prolonged advice for innovative small businesses were analysed. Particular attention was paid to the two intangible factors, i.e. the trust relationship as well as tacit knowledge. Both of them were identified as factors essential to the process of utilisation of business advice.

The trust relationship was identified at every step of the advice process. However, the initial phase of the advice process seems to be of key significance. It encompasses initial

contacts between company owners and advisors. It is the process of a personal nature involving a number of face to face meetings. The belief in the capacity of the advisor to solve the problem is a key to establish the cooperation. It should be noted that no form of formal verification of knowledge has been applied. The entrepreneurs do not have the appropriate instruments and knowledge. None of the cases include activities that could be called "trial order" and that would constitute a kind of test before entering into the advisory contract.

The establishment of the trust relationship appeared to be necessary to go through the process of the advice utilisation. It allows the interaction between the entrepreneur and the advisor at the high level of intensity, which involves among others: (i) openness in knowledge sharing, (ii) openness in generating new ideas, (iii) elasticity related to implementing new ideas to existing solutions. Since advice is related to the basic foundations of companies (new or existing), it is necessary to reveal all or almost all the details of the firm's operations – which is consistent with H1.

In none of the identified cases of advice utilisation, a detailed formal contract was signed. A trust-based and long-term relationship assuming mutual benefits if the firm succeeds can be observed instead. Informal cooperation, which becomes formal when the results of the implemented change become more visible, is typical. Although formal contracts are sometimes signed, they are very general and a reward for the advisor's work is rarely defined at the beginning of the process. Nevertheless, the advisor is interested in working harder than agreed, which has its etiology in a deep, personal relation or a business relationship, and this is even more visible when the entrepreneur's determination to implement changes and agreed solutions is observed. The advisor must be also ready to share knowledge and resources when the reward is not assured, and thus he/she must perceive other sources of reward instead of direct benefits from the advice. The entrepreneur, on the other side, must be, first of all, ready for change, but also open enough to admit his or her own knowledge gaps and problems faced. Self-awareness and honesty constitute the key for success here.

The knowledge which is built as an outcome of the advice utilisation is strictly related to a specific case of the given company. Every solution is single-use, unique in its application, and takes into account a range of unique factors, including the personality of the entrepreneur and his/her personal and managerial features. Thus, an important part of the advisory process involves tacit knowledge – either at the stage of advisory process or as its outcome – which is consistent with H2.

The process of new knowledge creation is complex and requires the advisor's involvement not only at the problem solving stage but also at the stage of the problem formulation. Entrepreneurs are not able to precisely specify encountered problems. Additionally, these problems are of dynamic nature, i.e. they change in time as subsequent decisions are made and actions are taken. This is due to the fact that they appear in the strategic change context and relate to both the management of crisis and the transformation of the firm. They occur when the entrepreneur wants to change the firm significantly or wants to explore new opportunities, but his/her ability to do that is limited in terms of knowledge and experience.

In order to solve thus defined problems, the interaction between the entrepreneur (or a team of entrepreneurs) and the business advisor (or a team of advisors) is needed.

Thus the transfer of knowledge does not look like a typical one-way flow but is multidimensional and the process of advice is to be perceived as a complex process of constructing new, customised solutions involving the process of adapting them to the specific firm's context. From this point of view, the business advice is the process of constructing new knowledge combined from internal and external sources. In this interaction, the knowledge and experiences of the entrepreneur and the advisor are necessary for the process to be effective. Different backgrounds and different histories of both actors are valued in this respect as they create the potential for more creative and thus spectacular ideas for problem solutions. Therefore, they build a base for the creation of knowledge which is highly specific, and because of high intensity of personal interaction does not necessarily need to be encoded. Thus, a substantial share of the process outcome has a form of tacit knowledge.

CONCLUSIONS

The analysis conducted led to the description of the features of the process of business advice utilisation with particular respect to trust as well as tacit knowledge issues. Both elements are intangible in their nature and cannot be demonstrated and identified directly, therefore, the analysis involves a range of factors which indicate them indirectly. The adopted research method in the form of individual in-depth interview technique proved to be adequate to the highly complex phenomenon of the process of business advice for small innovative companies. However, a relatively small number of the analysed cases restricts to a certain extent the possibility of formulating broad generalisations.

Both analysed elements were identified in all the described cases as vital for the process. In the case of trust relationship, its role was indicated as a factor enabling the start of the process of advice. Thus, the importance of the initial phase should be highlighted. It involves a range of personal contacts, hence it is in line with a mixed perception of the process which involves professional as well as personal factors. Furthermore, the specific relation between the advisor and the entrepreneur (the individual relation) or a group of advisors and a group of entrepreneurs (the group relation) is very important for the process. The specification of such a relation was partly addressed in previous studies (Bennett & Robson, 2003), as well as by Kautonen, Zolin, Kuckertz and Viljamaa (2010). In particular, Chen, Sun, Helms and Jih (2008) indicate that the beginning of the relationship between the company and the advisor is initiated prior to commencing advisory activities. However, the rationale and options of such a relation must be further researched.

The trust relationship factor seems to be considered as one of factors that have a significant impact on the initialisation of the process of business advice utilisation in small innovative firms. It may also have implications related to public policies supporting business advice in SMEs. The presence of the initial phase of advice with all its consequences (e.g.: timing, nature of contacts, and the process of trust relationship building) influences the policy instruments which may be used in the process. It excludes the use of selection of advisory offer based on the price, which constrains the entrepreneur's choice to a limited number of (e.g.: certified) professionals. Furthermore, the solutions restricting the free extension or modification of advisory relationships with the same advisor are incompatible with the nature of the process. In practice, the indicated constraints refer to the use of solutions based on public procurement and rigid contracts.

Tacit knowledge was identified as an enabling factor as well as an outcome of the business advice utilisation process. When tacit knowledge is considered an enabling factor, it may be seen as an element allowing the provision of effective assistance for the company in the process of advice utilisation. This may highlight the importance of the initial phase of advice. Initial contacts are partly related to the analysis of the advisor's professional as well as interpersonal competences. The analysed cases have shown that establishing confidence on the part of the entrepreneur is not related to formal factors, but rather to the entrepreneur's perception of the knowledge base presented by the advisor, and because of informal nature of the initial contacts, it is mainly tacit knowledge which may be evaluated.

Tacit knowledge considered as an outcome of the process provides implications to measurement of business advice in terms of its impact on business performance and thus competitiveness. The distinction between the use and the utilisation offers a new framework in which variables common for all the cases are consistent and known. It also opens paths for a further process analysis, and thus the measurement of a short and long term impact, or even for distinguishing between the impact and the influence considering different time perspectives as specified by Łobacz and Głodek (2015). We may assume that an equally important effect of the advice is enlargement of the knowledge base of the small firm, which may be applicable to subsequent growth phases of the enterprise.

The presence of new tacit knowledge perceived as an outcome of advice is associated with close, direct cooperation between the owner/manager and the business advisor. Labas et al. (2015) recognise advantages that interactive cooperation provides for knowledge creation. In broader view it suggests that the concept of business advice utilisation contributes to advance the understanding of business advice for small innovative firms in the long and short term process perspective. It provides an explanation of the new knowledge creation process, which is associated with strategic change and takes into account a significant role of the entrepreneur-advisor combination and their mutual relations.

The analysis also raises some new questions which need to be answered. For example, it is not very clear yet whether outcomes of both the use and the utilisation of business advice differ considerably or which factors determine significantly the value of the final outcomes. However, what is already known provides clear guidelines how to approach these issues.

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Entrepreneurial Behaviour in Periods of Deterioration of Small Firms' Condition

Jarosław Ropega

ABSTRACT

Objective: The aim of the paper is to indicate types of entrepreneurial behaviour which should be triggered during periods of deterioration of small firms' condition.

Research Design & Methods: The study concerned the causes and symptoms of economic failure identified along the trajectories of this phenomenon. The paper uses selected parts of the study related to the non-occurrence of entrepreneurial behaviour or errors in this behaviour identified in the surveyed firms. The entire study was conducted based on the analysis of 32 case studies carried out among the former entrepreneurs of micro and small firms liquidated in the period from 01.01.2006 to 31.12.2011.

Findings: The study helped to identify shortcomings in the entrepreneurial process along individual trajectories of economic failure of the surveyed companies.

Implications & Recommendations: As a result of the conscious entrepreneurial process, small firms have the opportunity to leave the trajectory of economic failure, indicated by the deteriorating condition of the company. It is therefore necessary to develop knowledge concerning the entrepreneurial process and entrepreneurship among managers of small firms.

Contribution & Value Added: According to the author, one of the key factors affecting the survival of small businesses in the period of deterioration of their condition is the initiation of the entrepreneurial process and/or its deliberate continuation. It seems quite natural to base components of this process on the existing support tools for entrepreneurs that are at risk of economic failure.

Article type: research paper
entrepreneurial process; economic failure; small firms; entrepreneurial

Keywords: ial behaviour; firm's survival; entrepreneurship; trajectories of economic failure

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INTRODUCTION

In today's economy an increasing number of analyses are devoted to observation and evaluation of business growth and development processes. The interest is not focused only on large and medium-sized companies, but also on small and micro firms. The phenomenon of an increasing interest in growth and development processes in the group of micro and small firms provides a great opportunity to identify ways in which entrepreneurial behaviour, or the lack thereof, affects changes occurring within companies. The author of the paper assumes the need for comprehensive perception of entrepreneurial behaviour in this group of firms. However, it is a very difficult task, since, despite a smaller scale of business activity, the impact of the environment and the specificity of processes taking place within the company do not allow to draw simple conclusions about the causes and the course of growth and development processes. In the author's opinion, it is important to focus on entrepreneurial behaviour at a particular stage of the firm's functioning. Economic practice indicates that both in the initial phase of their operation and in the subsequent phases, small businesses may undergo periods of a deteriorated condition, i.e. the deterioration of the parameters achieved by the firm, which is evident in its stagnation that often transforms into the process of reduction in the firm's market share, its size and impact on the market (including its competitive position).

The aim of the paper is to show types of entrepreneurial behaviour which should be triggered during periods of deterioration of small firms' condition.

In order to achieve the objective, the following hypotheses were adopted:

- H1:** Entrepreneurs identify symptoms of deterioration in the condition of their firms too late, and therefore take corrective actions too late.
- H2:** Effective management of a small firm in the period of deterioration in its condition requires the initiation of the entrepreneurial process and/or its deliberate continuation.

In order to verify the hypotheses adopted, a theoretical analysis of the problem based on a literature review and an analysis of the results of empirical research were conducted.

The study concerned the causes and symptoms of economic failure identified along the trajectories of this phenomenon. The paper uses selected parts of the study related to the non-occurrence of entrepreneurial behaviour or errors in this behaviour identified in the surveyed companies. The entire study was conducted based on the analysis of 57 case studies, including 32 case studies carried out among former entrepreneurs of liquidated micro and small firms.

The literature review covers a series of issues related to the field of entrepreneurship, management of small firms and their economic failures.

The section concerning the entrepreneurial process as a factor in reducing the risk of economic failure focuses on the description of the ways of preventing unintended economic failures of small firms based on the entrepreneurial process.

The section on material and methods presents the results of studies available in the literature and the results of the author's own research.

The section concerning results and discussion presents the research findings in conjunction with the possibility of their use by entrepreneurs. Further research opportunities and their limitations are indicated.

Conclusions contain the author's own conclusions and recommendations for entrepreneurs and representatives of business environment institutions.

LITERATURE REVIEW

The Entrepreneurial Process as a Factor in the Creation and Development of Small Firms

Due to the fact that entrepreneurship does not occur at once but is a process that has its beginning and subsequent phases, it is difficult to systematise (Piasecki, 2001, pp. 25-28). The entrepreneurial process is often dynamic, unique, intermittent, variable and initiated by the individual's will. It is therefore dependent on many variables and characterised by high sensitivity to changes in their value. Based on analyses of the characteristics of entrepreneurship perceived from the process approach perspective presented by various authors, it can be seen that the most important is identifying and making use of opportunities, or possibilities, which in subsequent phases leads to the creation of a new venture.

Among the many studies of the process of business creation, the model combining separate actions into an overall concept of creating a new organisation developed by Gartner should be emphasised (Gartner, 1985, p. 698).

On the basis of the four-dimension model, interactions between the initiating individual, the environment, the organisation and the process can be observed.

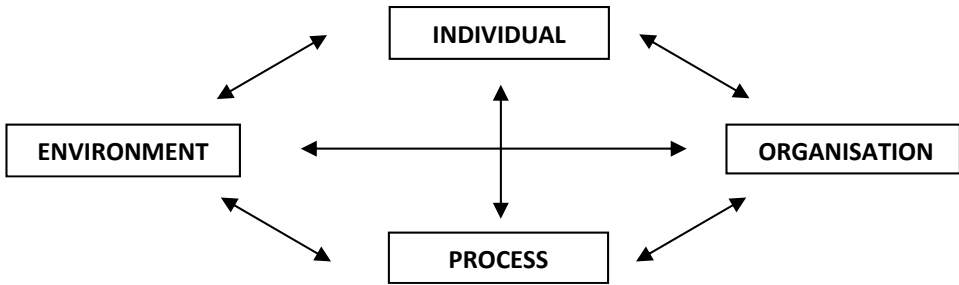


Figure 1. Gartner's model
 Source: (Gartner, 1985, pp. 696-706).

1. The individual that is involved in the process (analysed in terms of psychological attributes, such as the need for achievement, willingness to take risks).
2. The environment (a situation in which the individual finds himself or herself and which affects him or her - the availability of capital and other resources, suppliers, etc.).
3. The organisation (the type of business).
4. The process (the type of actions taken - accumulation of resources, production, organisation building).

According to Gartner, the presented model is an instrument for analysing different paths in the creation of new ventures, showing the complexity of the phenomenon and the interactions between the various dimensions of the model.

In the model proposed by Shane (2003, p. 10), the entrepreneurial process begins with the identification of business opportunities, i.e. situations in which resources can be re-combined and used in a way which brings profits. Entrepreneurship is understood in this model as a relationship between the individual and the opportunity. It is a directed process which occurs in a certain order, which may be non-linear.

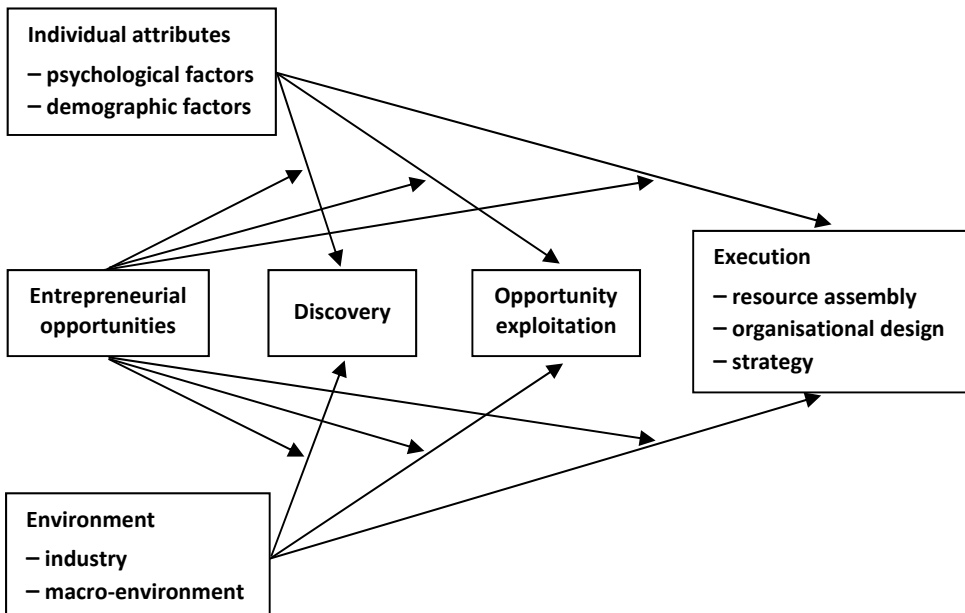


Figure 2. Shane's model

Source: (Shane, 2003, p. 11).

The process of identifying opportunities is individual in its nature and occurs in different ways depending on the available information and beliefs of the entrepreneur. Access to information is shaped by many factors, such as life experience, networking, education, and the manner of search for information. Despite having access to the same information, not everyone is able to identify emerging opportunities. Individual characteristics of a given person affect the manner of identifying and making use of opportunities. Table 1 presents demographic and psychological factors that, according to Shane, have an impact on the use of entrepreneurial opportunities.

Another depiction of the entrepreneurial process is the model proposed by Timmons and Spinelli (2004), which shows the most important components of this process (Fig. 3).

The presented model shows that there should be a balance and a mutual fit between the presented elements, i.e. opportunities, resources and the team. First, the entrepreneur must recognise the market opportunity which underpins the whole process. Its perception prompts the individual to take action through which it will be possible to make use

of this opportunity. For this purpose, the entrepreneur creates a team and acquires the necessary resources.

Table 1. Factors influencing the use of entrepreneurial opportunities

Demographic factors	Psychological factors
Education – knowledge and skills that help in the identification of opportunities	Extraversion
Work experience – a richer professional life results in the accumulation of a greater amount of information that is needed to identify opportunities	Intuition
Marital status – married people have more courage to take risks	The need for achievement – people with a strong need for achievement are more likely to take advantage of emerging opportunities, as it is connected with facing new challenges
Entrepreneurial experience – observation of other entrepreneurs (e.g.: family members) teaches entrepreneurial behaviour	Propensity to take risks – the willingness to take risks or act in conditions of uncertainty is conducive to making use of opportunities. This personal feature is related to tolerance of ambiguous and unclear situations
Age – older people have more information resources but are less willing to take risks	The need for independence – people used to taking independent actions make use of entrepreneurial opportunities more often
Social position – a higher social status increases the chances of taking advantage of opportunities, as it is easier for these individuals to convince others to their ideas, in addition, they also often have numerous, valuable contacts	Control – inner conviction about the possibility of having an impact on the environment in which one operates helps in taking advantage of opportunities
	Confidence in one's own abilities
	Self-confidence, optimism and conviction in the righteousness of one's beliefs allow the exploitation of entrepreneurial opportunities

Source: The author's compilation based on (Shane, 2003, pp. 45-59).

Opportunities

The entrepreneurial process begins with an opportunity. The recognition of this opportunity is rooted in creativity which is an attribute that the entrepreneur and the team share. However, not every good idea translates into a unique opportunity. Timmons and Spinelli indicate that for every 100 ideas presented to investors, whether in the form of a business plan or a general proposal, fewer than four receive funding (Timmons & Spinelli, 2004, p. 111). Therefore, the ability to quickly estimate potential effects of an idea and to make the decision of how much time and resources to dedicate to it is an important skill of the entrepreneur and the investor.

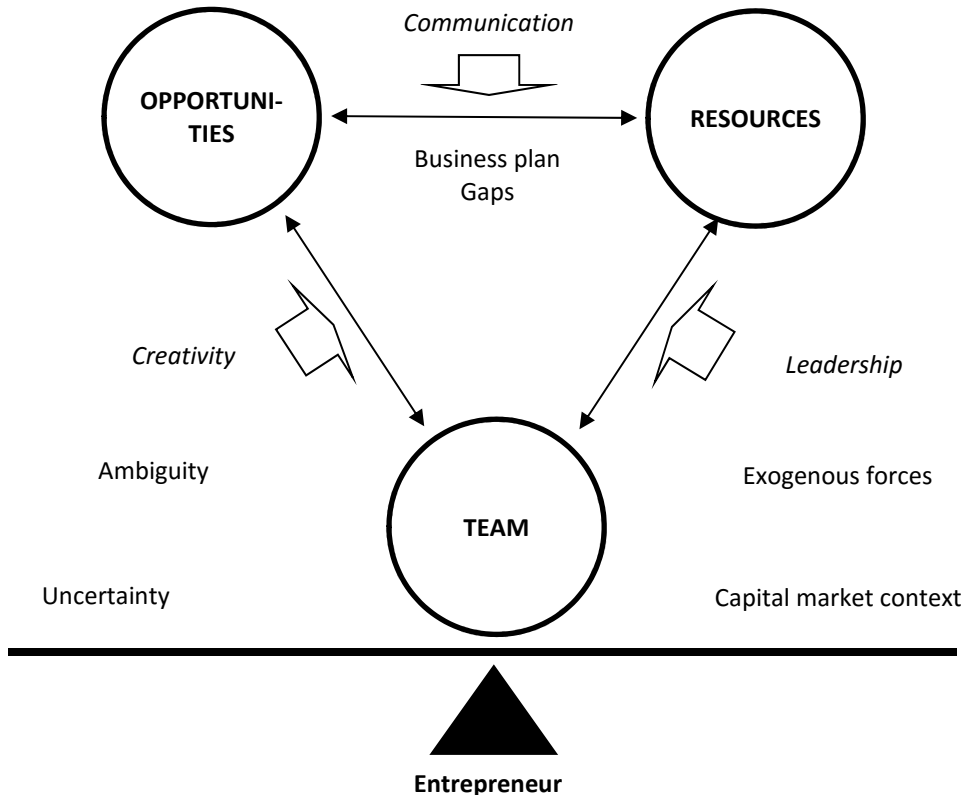


Figure 3. Entrepreneurial process
 Source: (Timmons & Spinelli, 2004, p. 110).

Resources

According to Timmons and Spinelli (2004), it is not essential to have all the necessary resources, especially capital, to make a venture successful. Money follows high potential opportunities, perceived and promoted by a strong management team. The authors cite the concept of *bootstrapping* as a way to create entrepreneurial companies since this concept allows to develop a significant competitive advantage. *Bootstrapping* is a philosophy of business operations, especially in the early stages of the company's development, based on the use of internal sources of funding with cost reduction accompanied by the rapid introduction of the venture into the market to generate revenues. At a later stage, further improvement of the product occurs. Appropriate management of working capital cycle (a short-cycle of receivables turnover along with the maximum extension of terms of payment) is an important principle in this respect.

Team

A new venture requires an entrepreneurial leader who has such personal qualities as the ability to quickly learn and teach others, flexibility, the ability to face adversity, as well as honesty and integrity. The ability and skills to acquire other key members of the team and

then build this team are one of the most desirable capabilities which investors look for. When creating a team, attention must be paid to professional qualifications, motivation and commitment, self-reliance, teamwork skills and creativity.

To sum up, the entrepreneurial process is:

- driven by opportunity,
- based on an entrepreneurial leader and an entrepreneurial team,
- creative and resource-conserving,
- dependent on the fit and balance between resources and needs,
- integrated and holistic.

The above-mentioned considerations are used in the discussion on entrepreneurship in the period of conscious creation of the future growth and development of the firm by the entrepreneur. At this point, it is worth drawing attention to the role of business model in this process, which is increasingly often indicated by the authors. A model which is practical, comprehensible and possible to independently design and build by the entrepreneur. In addition, it is easier to build a strategy comprising the stage of strategic analysis, strategic planning, strategy implementation and control based on a business model. Regrettably, this strategic orientation is not often used by small firms. Many small firms believe that strategies are used in medium-sized or large companies. In this respect, it is worth noting that modern approaches to organisational strategy include a clear focus on (compare: Romanowska, pp. 95 – 103, in Krupski, 2005):

- company size,
- organisational solutions used in the company (e.g.: radial or simple organisational structure),
- outsourcing relations,
- forms of cooperation with other organisations, etc.

This is reflected in research and papers on the subject. In recent years, there are new perspectives on the development of strategies of organisations that operate in an ever-changing, turbulent environment. Concepts of organisations operating on the edge of chaos, without clearly defined objectives, experimenting and looking for optimal solutions (Brown & Eisenhardt, 1998, pp. 7-9), taking advantage of opportunities and formulating simple rules instead of strategic goals (Eisenhardt & Sull, 2001, pp. 109-110) are an attempt to respond to challenges presented by a turbulent environment. According to Krupski, strategies for organisations operating in a turbulent environment should be flexible and geared towards making use of opportunities, which can be achieved through (Krupski, 2009, pp. 99-100):

- resignation from the description of the firm's future in terms of product and market in favour of the description of the strategy in terms of resources that determine the effective use of opportunities,
- the assumption that the longer the time horizon, the more issues concerning the acquisition and use of resources should be included in the strategy,
- the assumption that the strategy should include a plan to create the conditions for exploiting opportunities or simple rules of the organisation's functioning,
- the assumption that the only form of strategy in terms of product and market is one characterised by a dynamic nature in the form of scenarios or options.

At the same time, as pointed out by the author of this concept, uniqueness and originality of tangible resources is rather difficult to achieve (apart from few exceptions, they are usually widely available), whereas unique combinations of intangible resources can strengthen the firm's competitive position. Due to their potential originality, the following resources have been identified (Krupski, 2007, pp. 14-15):

- knowledge, skills and talents of employees (specialised, elite, original),
- attitudes and behaviour of employees, motivations and other elements of organisational culture,
- privileged relations with the environment, formalised – licences, certificates,
- privileged relations with the environment, informal – personal contacts based on trust and loyalty, etc.,
- industry technologies – e.g.: patents,
- information technology - proprietary software,
- the company's own natural resources or resources at its disposal,
- location,
- the firm's image - trademarks, history, reputation,
- sources of funding,
- routines, inter-organisational solutions.

The results of research conducted by Krupski (2007) have shown that for small and micro firms the most valuable, rare and difficult to reproduce are informal privileged relations with the environment.

As follows from the previous considerations, the person of the entrepreneur is inextricably linked with the analysis of the functioning of small businesses. This applies both to business success as well as failure. The subject of deterioration in the condition of the firms analysed in the paper should be seen in relation to the cause(s) of the deterioration of their business parameters and the effects that this situation can have in the future. As a result of errors on the part of entrepreneurs, symptoms of deterioration in the economic situation of the company appear. This period may be transient and manifest itself only as a short-term decline or stagnation of the firm's position in the market (its market share), a reduction in its size, etc. However, in many cases, this period represents a threat to the survival of the company on the market. As a result, the company may find itself on the trajectory of business failure (Ooghe & De Prijcker, 2006, pp. 12-13; Crutzen, 2010).

The Entrepreneurial Process as a Factor in Reducing the Risk of Economic Failure

The literature describing consequences of long-term deterioration in the condition of small businesses comprises models that indicate areas and related causes of the entry of a small firm onto the trajectory of economic failure. The areas include: **the company's policy and resources, the characteristics of the entrepreneur and the characteristics of the enterprise.**

The company's policy and resources (its strategy, finances, operational activities, management system, tangible and intangible resources, etc.) are associated with the person of the entrepreneur (the entrepreneur's motivation, skills, abilities, character traits, etc.) and with the characteristics of the enterprise (the period of its development, sector, size, etc.) They form, along with the environment, the real source of the given firm's entry onto the trajectory of economic failure. The deterioration of the condition of the firm, which

should be a warning sign for the entrepreneur (Ropega, 2013, pp. 59-60), may be the beginning of this road.

Analysing the course of economic failures of small businesses, one can come to the conclusion that action is needed to identify causes of the deterioration in their condition (including root causes), as well as symptoms and manifestations of business crisis (Piascki, 2012, p. 6).

Given these components, it can be noted that the person of the entrepreneur plays an important role in this respect. The entrepreneur becomes both the main initiator of the creation of the company and the main person responsible for causing its economic failure. The entrepreneur often participates in events leading to the deterioration in the condition of the small business and its future economic failure.

Thus, the literature provides recommendations to prevent unintended economic failure of small firms, directly related to the behaviour of the entrepreneur. For example, in Poland, based on a recommendation of the Ministry of Development (formerly the Ministry of Economy), the New Opportunity Policy (NOP) programme was created, containing, among others, the following recommendations:

1. improvement of access to information and knowledge sources for entrepreneurs,
2. improvement of the economic, legal, political and technological system shaping the conditions for small firms' operations,
3. introduction of changes in the characteristics, behaviour and attitudes of managers of small firms.

In the context of the undertaken subject, it seems particularly relevant to seek to increase the importance of entrepreneurial traits, behaviour and attitudes in the decision-making process related to managing a small firm in the period of deterioration in its condition and its potential entry onto the trajectory of business failure.

Table 2. Basic "inherent" problems specific to small businesses

Determinants of firm's success or failure	Characteristics
The person of the owner-manager	Key decisions about the firm are taken usually by one person - the owner-manager. Personal qualities and attitudes of the owner-manager determine how a small business is managed and the likelihood of its success or failure. The quality of management in the firm depends on what kind of experience and skills its owner has.
Isolation	Owners of small businesses do not have the opportunity for mutual discussion or sharing problems, as is the case in larger companies. A lack of sufficient knowledge and information about the environment.
Lack of time	Focusing key functions in one hand leads to a lack of time and working under very high pressure, which affects the quality of management.

Source: own compilation based on (Argenti, 1976, pp. 123-125), (Jennings & Beaver, 1995, pp. 185-200), (Peacock, 2000, pp. 6-7), (Gumpert & Boyd, 1984, pp. 18-24), (Larson & Clute, 1979, pp. 35-43).

Many researchers that study the deterioration of the market position and failures of small businesses indicate that the person of the owner-entrepreneur is the key factor

determining the success or failure of the given company¹Argenti determines these factors as "inherent" flaws present in the company. They include: (i) the characteristics of the owner-manager (ii) isolation, (iii) a lack of time. The table 2 presents the description of the above-mentioned factors (Argenti, 1976, pp. 123-125).

The current trend in research related to the person of the entrepreneur, mainly based on the human capital theory (Becker, 1993, p. 59), suggests that the higher the quality of human capital in terms of personal attributes and skills of the entrepreneur, the higher the chance of the company's survival. Among the major factors affecting the reduction of the risk of failure, the following ones come to the fore: experience in business and management (Brüderl, Preisendörfer, & Ziegler, 1992, pp. 231-233; Pasanen, 2005, p. 103), professional experience in the industry (Preisendorfer & Voss, 1990, pp. 123-124; Carter, Gartner, Shaver & Gatewood, 2003, pp. 33-34; Brüderl et al. 1992, pp. 231-233), and education (Brüderl et al. 1992, pp. 231-233; Bates, 2005, p. 8).

MATERIAL AND METHODS

For the purpose of the paper, a theoretical analysis of the problem based on a literature review and an analysis of the results of empirical research were conducted. The author identified in the literature the results of research on the process of decision-making of entrepreneurs. The studies were divided according to the following criteria: entrepreneurs' decisions in relation to their motivation for undertaking business activity and entrepreneurs' decisions in relation to their character traits and behaviour. The following factors influence the behaviour and attitudes of entrepreneurs in the periods of deterioration in the condition of their firms.

Motivation for Undertaking Business Activity

According to Smallbone, motives for undertaking business activities may have an impact on the future success of the given venture (Smallbone, 1995, p. 12). Greater chances of survival are observed in the case of companies founded by the entrepreneurs who saw opportunities arising from the environment and were prompted to establish their firm than in the case when their motivation was solely to become self-employed to avoid unemployment.

Storey (1994, pp. 91-99) classifies these types of motivation as positive (pull factors) and negative ones (push factors)². Positive motivation results from "the need to become an entrepreneur" (Wasilczuk, 2005), an informed choice concerning a better alternative, as well as the perception of an opportunity for a successful venture (Baćlawski, Koczerga & Zbierowski, 2005, pp. 11-12)³. The factors such as the need for independence, the need

¹ Large companies are generally managed by a team of professional managers, hence the impact of individual personal characteristics on the effectiveness of the company's operations is smaller, in contrast to small firms where the decision-making process is often dominated by one person - the owner.

² In other words: opportunity factors or necessity factors (Baćlawski et al., 2005, pp. 11-12; Verheul et al. 2010).

³ Giacomini et al. (2007, p. 11) indicate the following groups of pull factors: factors related to market opportunities, factors related to the improvement of one's material status. Carter et al. (2003, p. 20) provide the following classification of motivation categories: innovation (the desire to introduce a new product or service), independence (freedom to control one's own time, more flexibility between working time and time devoted to the family),

to succeed in running one's own business or a dream of a particular type of business (Orhan & Scott, 2001, p. 238), as well as the desire for filling a market niche and personal development (Carter et al. 2003, p. 37) contribute to an increase in the growth potential and higher chances of survival more than negative motives (Bačlawski et al. 2005, pp. 14-18).

The necessity (compulsion) to set up a business is mainly due to the situation in the labour market. According to the authors of Global Entrepreneurship Monitor (Bačlawski et al., 2005, p. 17), negative motivation is based on the assumption that long-term high unemployment or the threat of losing a job stimulate the desire for economic independence⁴, i.e. the creation of businesses is a reaction to social difficulties and little chance in the labour market⁵. Giacomini et al. (2007, p. 12) also include pressure from relatives to continue the family business in the group of negative factors.

The Firm's Survival

In the research conducted by Watson, Hogarth-Scott, and Wilson (1998, p. 232), such motives to establish business activity as the need for independence, dissatisfaction with the current job, or the utilisation of creative skills were more often indicated by entrepreneurs who continued business activity than by those who have suffered economic failure. The research conducted by Hall (1994) shows that a greater propensity for failure was observed in companies founded by entrepreneurs who were forced to do so, e.g.: due to the reduction of employment, than in companies where "positive" motives were the reason for taking up business activity, e.g.: the desire to increase earnings, or the need for independence.

The Entrepreneur's Character Traits

The entrepreneur's character traits can also have a significant impact on decision-making in the firm, thus on the results achieved, and in consequence, on its business success or failure. Larson and Clute (1979, p. 37) point to such personal features of the entrepreneur that are conducive to failure: relying on one's own taste and opinion in the product selection, making decisions based solely on intuition and emotions and not on objective premises, not taking advice from external advisors, inflexibility in decision making, as well as focusing on the past and ignoring future events. In addition, the following characteristics

recognition (in the eyes of the family and friends, a higher position in the community), roles (imitating others), financial success, and self-realisation. Birley and Westhead (1994) and Verheul et al. (2010) make similar classifications.

⁴ This is a reference to Knight's theory (quoted after Storey, 1994, pp. 62-63), according to which people make a choice in terms of professional activity between: being unemployed, being employed or being self-employed.

⁵ The push factors related to the situation in the labour market include: unemployment, unsatisfactory earnings, dissatisfaction with the current job, the difficulty with reconciling professional and family roles (Verheul et al., 2010, Giacomini et al., 2007). The last factor is related particularly to women who often have difficulty reconciling employment with the upbringing of children (compare: Bačlawski et al., 2005, Carter et al. 2003). According to the research for Global Entrepreneurship Monitor, in 2004, among 34 countries participating in the project, on average 75.2% of the ventures were undertaken as a result of an emerging opportunity, 20.9% out of necessity and 3.9% for other reasons. In Poland, ventures undertaken by choice amounted to 64.7%, while the ones undertaken out of necessity to 35.3%. Women are more likely than men to start companies out of necessity, and in terms of the age of entrepreneurs, the largest percentage of people engaged in business activity because of push factors was recorded among the 55-64 age group – 54.5% (Bačlawski et al., 2005, pp. 16-17).

may be also mentioned: too low or too high propensity for risk taking (Ibrahim and Goodwin, 1986), a lack of charisma (O'Neil & Duker, 1986) or an autocratic and dominant character (Argenti, 1976). To understand why some entrepreneurs are successful and others fail, the combination of three elements should be analysed: personality traits, knowledge and experience along with professional skills (Ropega, 2013, p. 60). The likelihood of success or failure does not depend on a certain set of attributes, but on the infinite variety of combinations in which the particular person's positive attributes can outweigh the negative traits.

Based on the theoretical analysis of the problem, the results of published studies and the discussion concerning the issue, the author conducted his own research. For the purpose of the paper, the author formulated two research hypotheses:

- H1:** Entrepreneurs identify symptoms of deterioration in the condition of their firms too late, and therefore take corrective action too late.
- H2:** Effective management of a small firm in the period of deterioration in its condition re-quires the initiation of the entrepreneurial process and/or its deliberate continuation.

The above-presented hypotheses were included in the methodology of the study.

The study concerned the causes and symptoms of economic failures identified along the trajectories of this phenomenon. The entire study was conducted based on the analysis of 32 case studies carried out among the former entrepreneurs of micro and small firms in the period from 01.01.2006 to 31.12.2011. Their addresses were extracted from the REGON (National Business Registry) database. As a result of the verification, a group of potential addresses, which could also be places of residence of the entrepreneurs, was established. The criteria for the selection included: the contact made with the former owner of the liquidated company, obtaining his or her approval to conduct research, the verification of the actual liquidation of economic activity, and conducting the full range of study. The research was conducted throughout the country. The method of the selection of companies for the study was purposeful.

The ancillary form used in the study included the following issues:

- identification of the number of employees at the time of liquidation and a year before the liquidation,
- predominant type of activity (based on the Polish Classification of Activity),
- the firm's territorial area,
- number of the owners,
- age of the owners,
- the owner's experience in conducting business activity,
- motives for undertaking business activity,
- internal causes of failure, including the area of: strategy, expansion, planning and financial management, human resources, marketing, innovation, production/services and operational activities,
- external causes,
- access to sources of financing,
- effective prevention of economic failure.

The paper uses selected parts of the study related to the non-occurrence of entrepreneurial behaviour or errors in this behaviour identified in the surveyed companies. In the course of the study, financial and non-financial information was collected. 18 entrepreneurs made the financial documentation of their firms available, in the other cases, the assessment of the economic and financial standing of the firms was carried out in a descriptive manner by their owners, using the characteristics presented by Argenti. Changes in the condition of the firm in time were characterised as follows:

- Poor condition of the firm – the firm's results are worse than its major competitors' and the industry average; the firm's financial results or cash flows are negative;
- Good condition of the firm – the results are comparable with its competitors or the industry average, profits are made and positive cash flows are recorded;
- Excellent condition of the firm – the results surpass those achieved by its competitors, an increase in financial results compared to previous periods is observed;
- Fantastic condition of the firm – rarely achievable, characterised by almost unreal results in comparison with the industry or its competitors.

As a result of the research conducted, the verification of trajectories of economic failure in small businesses presented in the literature was carried out. In the course of analysing the results of research, an additional, unique trajectory identified in the surveyed companies was isolated. Its identification was due to the specificity of the trajectory course in 7 of the 32 firm surveyed. Their share was so large that the author introduced the trajectory of LACK OF SELF-CRITICISM AFTER RAPID, APPARENT GROWTH OF THE COMPANY into the existing classification. As a result, the study highlights 6 trajectories of business failure (TBF).

Table 3. The number of cases identified in the individual trajectories of economic failure

Type of trajectory of business failure (TBF)	Number of cases
(TBF 1) FAILED START-UP	4
(TBF 2) GROWING COMPANY UNDER UNSTABLE MANAGEMENT	8
(TBF 3) LACK OF SELF-CRITICISM AFTER RAPID, APPARENT GROWTH OF THE COMPANY	7
(TBF 4) LACK OF SELF-CRITICISM AFTER REAL, RAPID GROWTH OF THE COMPANY	5
(TBF 5) MATURE APATHETIC COMPANY	6
(TBF 6) EXCESSIVE INTERNAL CONSUMPTION	2

Source: own compilation.

The replies provided by the respondents were characterised by a large degree of subjectivity on the part of the former business owners - managers. In the course of the study, the author sought to verify the respondents' answers with great care, asking questions related to the context of actions and decisions undertaken by the business owners. A great deal of attention was devoted to the references to possible strategies of the surveyed firms and the assessment of the environment on the part of the former owners – managers related to a strategic approach. Despite the author's doubts about the objectivity of the responses of the former owners in relation to their role in the process of economic failure, their arguments were accepted. However, the descriptions of individual trajectories contain the author's conclusions concerning the management process in the analysed cases.

Due to the aim of the paper and the research hypotheses under verification, the following components indicating the deterioration in the condition of the firm along individual trajectories (based on the division presented in Table 3) were identified: specific threats, systematic threats, internal causes, external causes, non-financial symptoms, financial symptoms, and the course of the crisis.

The above-presented components were analysed in relation to the activities of the entrepreneurs who provided an assessment of their own efforts to initiate the entrepreneurial process and/or continue it in a deliberate manner.

As a result of the study, the responses were obtained that indicated a lack of understanding of the entrepreneurial process and its application.

RESULTS AND DISCUSSION

The qualitative study conducted by the author of the paper has confirmed a lack of entrepreneurial attributes, behaviour and attitudes in people that have concluded economic activity as a result of business failure. The author's research indicates a correlation between the lack of entrepreneurial behaviour and individual trajectories of economic failure. Considerations regarding the phenomenon of economic failure of small businesses can be transposed into the factors that restrict the entrepreneurial process, based on the components of the model proposed by Timmons and Spinelli (2004). Limitations existing in relation to the model indicated in the first part of the paper are related to the occurrence of threats in place of the existing opportunities. The component of the entrepreneurial process in the form of the team may be also deprived of its leader or based on inappropriate relations between individual employees of small firms. In terms of the discussed model, shortcomings or wrong actions in individual components can be seen in practically all the six trajectories. As a result, the lack of entrepreneurial process identified was manifested in:

- Lack of response on the part of entrepreneurs to opportunities emerging in the environment – virtually all the surveyed ex-entrepreneurs could not point out any clearly identified opportunities that emerged at the time when the company perceived its deteriorating condition and entered the trajectory of business failure.
- Lack of response to threats emerging in the environment – among the surveyed entrepreneurs only six took action related to a real assessment of the risks arising from the micro-environment (creditors' claims, loss of key customers, loss of competitive advantages, etc.) and the macro-environment (adapting to changing regulations, responding to changes in exchange rates, changes in the market in terms of export/import, or changes in the prices of raw materials, etc.).
- The response to threats emerging in the environment was late/or inadequate to meet the needs. As a result, the firm failed to respond adequately to the threat. The "escape by going forward" often cited in the literature (Piasecki 2012) was used as a way to counteract the situation.
- Lack of entrepreneurship also occurred in the area of resources. The study included both intangible and tangible resources. Most of the respondents focused on the limitations of tangible resources in the form of fixed and working assets, a lack of access to resources resulting from cash shortage, the loss of access to tangible resources and

their inability to acquire new (alternative) resources. Only three respondents among the ex-entrepreneurs indicated the inability to use their own intellectual resources in the course of events initiated by the deterioration in the firm's condition. In their opinion, it was a fundamental error, as it did not allow them to diagnose the cause of the deterioration in the firm's condition and resulted in an inappropriate reaction to the situation. The respondents did not indicate the existence of a relationship between the lack of tangible resources and the mismanagement of the acquisition of these assets by the entrepreneur. They also did not acknowledge their own ignorance concerning different forms of financing of the firm's operations or forms of support. Also, there were no indications of a formal attempt to prepare the company that was at risk of failure to obtain such resources, e.g.: restructuring plans.

- No active manifestations of entrepreneurship in the area of team building were seen in the 29 analysed cases. This was the result of both a lack of employees in the period of the deterioration of business performance and a lack of focus of the managers of the surveyed companies on team building and development. Most frequently indicated were conflicts between employees and the entrepreneur (the search for a new job during working hours, prolonged absenteeism, absence during the activation of the market for the sake of seasonal work - employees did not perform their professional duties in the company as they undertook seasonal work in construction, agriculture, etc.) and conflicts between employees (obstruction of the performance of official duties, theft, misrepresentation, etc.).

As a result of the deterioration or non-occurrence of entrepreneurial behaviour in the indicated areas, the entrepreneurial process could not take place or it proceeded in an inappropriate manner. Thus, changes are necessary to create a basis for the reduction of threats to business operations.

A lack of creativity, leadership, communication and teamwork is apparent in the analysed cases. Especially during the company's entry onto the trajectory of business failure, it is an additional factor limiting the possibility of counteracting the occurrence of such a situation.

CONCLUSIONS

The existing solutions describing countermeasures of economic failure show the importance of the strategic orientation in the process of quick identification of warning signs of deterioration in the firm's condition and the need to take swift preventive action. The assumptions in the model of counteracting the phenomenon of economic failure include the need for the speedy identification and analysis of the risk of the occurrence of such a situation, the identification of its causes and symptoms, and - as a result - the development of preventive measures. According to the author, one of the key factors affecting the survival of small businesses in the period of deterioration of their condition is the initiation of the entrepreneurial process and/or its deliberate continuation. It seems quite natural to base the components of this process on the existing support tools for entrepreneurs that are at risk of economic failure. Therefore, the effective implementation of the principles of the existing assistance programmes, for example, the New Opportunity Policy, is recommended. According to the author, the main factor initiating a conscious process of

strategic orientation in this field is education in the use of entrepreneurship in the modern economy.

The information presented in the results of the research can significantly expand knowledge on the functioning of small firms and the factors causing their entry onto the trajectory leading to economic failure. It has been found that certain factors and processes can affect the formation of erroneous spiral, thus in-depth studies of the process of economic failure are very important.

The results may be useful for entrepreneurs as well as for institutions supporting entrepreneurship and the development of small and medium-sized enterprises.

The research results are based on qualitative case study research. Further studies on a larger scale can help to clarify the factors of failure, and studies of motivation to undertake business activity (push and pull factors) as well as their impact on economic failure of small firms are also an interesting subject worth exploring.

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Aim and Scope

‘Entrepreneurial Business and Economics Review’ (EBER), as multi-disciplinary and multi-contextual journal, is dedicated to serve as a broad and unified platform for revealing and spreading economics and management research focused on entrepreneurship, individual entrepreneurs as well as particular entrepreneurial aspects of business. It attempts to link theory and practice in different sections of economics and management by publishing various types of articles, including research papers, conceptual papers and literature reviews. Our geographical scope of interests include **Central and Eastern Europe** (CEE) as well as South-East Europe (SEE) and **emerging markets** in general, however we also welcome articles beyond this scope.

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